ELSEVIER

Journal of Alloys and Compounds 271–273 (1998) 887–889

Journal of ALLOYS AND COMPOUNDS

Author Index of Volumes 271–273

Aaltonen, J., 296
Abraham, M., 872
Adachi, T., 799
Adams, J.L., 292
Akabori, M., 363, 374, 597, 670, 680
Akai, Y., 563
Akyıl, S., 769
Allen, T.H., 211
Allen, P.G., 123
Allibert, M., 645
Almeida, M., 456
Alstad, J., 303
Amaral, A., 19
Amaro, A., 456
Andreev, A.V., 418, 495
André, G., 474, 503
Ansoborlo, E., 19, 106
Antonio, M.R., 846
Antonov, V.N., 486, 831
Arai, Y., 577, 602, 666
Arko, A.J., 826
Asfari, Z., 778
Aslani, M.A.A., 769
Aso, N., 433
Assefa, Z., 854
Aytaş, Ş.(Ö)., 769

Baba, H., 322
Babelot, J.-F., 606
Babu, R., 395
Badurski, D., 499
Baglan, N., 778
Bailly, I., 96
Bakker, K., 632
Baranov, A.A., 782
Baron, P., 159, 738
Barré, B., 1
Barrero, J., 573
Barshick, C.M., 62
Bastug, T., 283
Bazin, D., 879
Beauvy, M., 557
Becker, J.D., 367
Beddoes, R.L., 180
Bednarczyk, E., 437, 490
Begg, B.D., 221
Beitz, J.V., 850, 872
Bell, D.I., 227
Beránková, P., 467
Berlanga, C., 557
Bernhard, G., 42, 201, 262, 765
Berthet, J.C., 144
Bessonov, A., 154, 231
Bickel, M., 49
Billard, I., 206
Boen, R., 645
Boisson, C., 144
Bond, E.M., 172
Bordère, S., 444
Bouby, M., 206
Bourdarot, F., 495
Bourée, F., 444, 474, 503
Bozhenko, E.I., 809
Braithwaite, D., 426
Brandel, V., 236
Brendler, V., 201, 765
Brooks, M.S.S., 831
Brown, G., 650
Brüchle, W., 292, 300
Brück, E., 495
Bubner, M., 123
Bucher, J.J., 123
Budantseva, N., 154, 231
Budantseva, N.A., 813
Buklanov, G.V., 287, 307
Burgada, R., 89
Burghartz, M., 544
Burghart, F.J., 463
Burlet, P., 495
Burns, J.B., 676
Burzo, E., 471

Calmet, D., 25
Campbell, D.T., 133
Caspi, E., 378, 474
Chandratillake, M., 821
Chassigneux, B., 236
Chevalier, B., 423, 444, 448
Chistyakov, V.M., 782
Chmaissem, O., 378
Chmutova, M.K., 760
Choppin, G.R., 719, 751, 774, 799
Clark, S.B., 189
Cobos, J., 610
Collison, D., 139, 180
Conrad, R., 606
Conradson, S.D., 221, 240
Cooper, B.R., 367
Coquerelle, M., 573, 610
Cordier, P.Y., 738
Cossonnet, C., 19, 778
Cox, L., 367
Cox, L.E., 826

Dacheux, N., 236
Darriet, B., 448
de Boer, F.R., 495
Delegard, C., 231
Delegard, C.H., 813
Deloffre, P., 370
Demuer, A., 426
Dendooven, P., 296
Denecke, M.A., 123
Denniss, I.S., 534, 817
de Réotier, P.D., 414
Desreux, J.-F., 267
Dierckx, A., 267
Dinse, C., 778
Domanov, V.P., 307
Donohue, D.L., 11
Dremov, R.V., 418
Drożdżyński, J., 863
Drozhko, E.G., 216
Duriez, C., 557
Duverneix, T., 557

Eberhardt, K., 303, 837, 876
Eccles, H., 139
Edelstein, N.M., 123
Eichler, B., 287, 300, 316
Eisen, M.S., 116
Endoh, Y., 433
Ephritikhine, M., 144
Eral, M., 620
Erdmann, N., 45, 837, 876
Erine, E.A., 782
Escaig, F., 19
Etourneau, J., 423, 448
Ewing, R.C., 189

Falanga, A., 370
Fanghänel, T., 728
Faure, Ph., 879
Fazekas, Z., 756
Fedorov, Yu.S., 534
Fedoseev, A.M., 813
Fedosseev, A., 154, 231
Fell, T.P., 54
Fernandez, A., 616
Fisk, Z., 826
Fitzpatrick, J.R., 172
Francis, A.J., 78
Fricke, B., 283
Fritsch, P., 38, 89, 93, 96, 100, 103
Fujimura, K., 530
Fujino, T., 382, 386, 452, 479
Fujita, R., 563
Fukuda, K., 386
Fure, K., 303
Fusselman, S.P., 592

Gäggeler, H., 300
Gäggeler, H.W., 277, 287, 307, 316
Galkin, B.Ya., 534
Galle, P., 19
Gallien, J.-P., 96
Gan, X., 172
Gay, R.L., 592
Geipel, G., 201, 765
Genet, M., 236
Gibson, J.K., 359
Gilewski, A., 499
Glatz, J.P., 573
Godinho, M., 456
Gonçalves, A.P., 456
Goncharenko, I.N., 426
Gouder, T., 841
Goutelard, F., 25
Grantz, M., 287
Gregorich, K.E., 292
Grigoriev, M., 154
Grillon, G., 103
Grimmett, D.L., 592
Grivei, E., 423
Gromova, E.A., 296
Guilmette, R.A., 66
Günther, R., 300

Haire, R.G., 342, 347, 676, 854
Hard, B.C., 262
Haschke, J.M., 211
Hasegawa, K., 680
Haskel, A., 116
Hasse, H.-U., 45
Havela, L., 418, 495
Heathman, S., 342
Heise, K.H., 123
Helfer, S., 272
Helliwell, M., 139
Henge-Napoli, M.H., 19
Herrmann, G., 837
Hess, N.J., 240
Hiçsönmez, Ü., 620
Hijikata, T., 592
Hildenbrand, D.L., 583
Hillberg, M., 463
Hill, C., 159, 738
Hill, N.J., 534
Hirata, M., 128
Hirota, M., 654
Hodgson, A., 54
Hoffman, D.C., 292
Homma, Y., 459, 689
Honda, F., 495
Hoshikawa, T., 693
Hoshino, Y., 549
Hu, Z., 378
Huang, J., 625
Hübener, S., 287, 316
Huber, G., 45, 837, 876
Hudson, M.J., 738
Humphreys, P.N., 821

Elsevier Science S.A.
PII: S0925-8388(98)00622-7

Hundley, M.F., 335

Ichas, V., 426
Ichikawa, S., 327
Iguchi, T., 549
Ikeda, Y., 163
Ikezoe, H., 327
Inagawa, J., 794
Inoue, T., 592
Ishikawa, A., 670
Itoh, A., 363, 597, 670
Ito, H., 629
Iwai, T., 685
Iwashita, M., 391, 400

Jäger, E., 300
Jakovlev, V.A., 296
Jarrell, M., 826
Jensen, M.P., 257
Jing, C., 742
Jingming, X., 742
Johnstone, T.L., 227
Jorgensen, J.D., 378
Jost, D., 300
Jost, D.T., 287, 307
Joyce, J.J., 826

Kagayama, T., 331, 482, 495
Kaibuki, T., 707
Kalibabchuk, V.A., 786
Kaltsoyannis, N., 859
Kalvius, G.M., 463
Karbowiak, M., 863
Kareta, A.V., 803
Kato, T., 400
Kato, Y., 719, 794, 867
Katsura, M., 549, 654, 658, 662, 697
Kawamura, F., 693
Kawashima, K., 530
Kayano, H., 702
Kelly, E.J., 227, 821
Kim, J.I., 746
Kim, J.-I., 728
Kimura, T., 719, 790, 794, 867
Kinoshita, K., 592
Kitatsuji, Y., 790
Klauß, H.-H., 463
Klenze, R., 746
Kobayashi, F., 347, 355, 374
Koga, J., 689
Köhler, S., 837
Kollár, J., 339
Koltunov, V.S., 817
Koma, Y., 538
Komatsubara, T., 433
Konashi, K., 530
Konings, R.J.M., 583, 606, 632
Kopmann, W., 463
Kraft, T., 831
Kratz, J.V., 45, 292, 300, 837, 876
Krueger, C.L., 592
Krupa, J.C., 154
Kubica, B., 307
Kučera, M., 467
Kudo, H., 327
Kulyako, Y.M., 760
Kulyukhin, S.A., 168
Kumagai, M., 693
Kunz, P., 45
Kurata, M., 636
Kurosaki, K., 641
Kutschke, S., 262
Kuznietz, M., 474

Laffargue, D., 444, 448
Lance, M., 144
Lander, G.H., 433, 463, 882
Lane, M.R., 292
Languille, A., 517
Laue, C., 292
Le Du, J.F., 778
Le Foll, L., 93
Le Naour, H., 93
Lebedev, V.Ya., 287
Lee, D.M., 292
Lee, S.-H., 163
Lefèbvre, P., 490
Léger, C., 544
Lemort, F., 645
Leprince, B., 38
Li, S.T., 872
Lien, D.T., 307
Liljenzin, J.O., 738
Litterst, F.J., 463
Litvina, M.N., 760
Liu, G.K., 850, 872
Livens, F.R., 139, 180
Lizon, C., 38
Lochny, M., 31
Löhle, J., 508
Lucaci, P., 471
Lupsa, I., 471

MacCordick, J., 206
Madic, C., 106, 159, 738
Malikov, D.A., 760
Malmbeck, R., 303
Mansel, A., 45
Martz, J.C., 211
Masaki, N.M., 176
Massiot, P., 38, 96
Masuda, H., 382, 452
Matsumoto, S., 689
Matsumura, T., 244
Mattenberger, K., 508
Matton, S., 96, 103
Matyáš, M., 467
Matzke, H., 544
May, I., 534, 650
Mazoyer, R., 557
McGrath, C.A., 292
McWhan, D.B., 408
Meguro, Y., 790
Melamud, M., 378, 474
Mendel, M., 303
Menovsky, A., 826
Menovsky, A.A., 467, 495
Métivier, H., 85, 89
Mignot, J.-M., 426
Mihálik, M., 495
Miller, N.H., 568
Millet, P., 517
Misiak, R., 307
Mitsugashira, T., 587
Miyake, C., 479
Miyake, M., 654
Miyanishi, H., 670
Miyashita, Y., 587, 707
Mizuguchi, K., 163
Modolo, G., 248
Moll, H., 765
Moody, J.C., 54
Morales, L., 826
Morello, M., 25
Moritani, K., 587
Moriyama, H., 587, 707
Motohashi, H., 184, 363
Moulin, C., 106
Mühling, G., 606
Mukoyama, T., 128
Muto, H., 404
Myasoedov, B.F., 216, 760
Mydlarz, T., 499

Nagaishi, R., 794
Nagame, Y., 327
Nagarajan, K., 395
Nagasaki, S., 252
Nähler, A., 303
Nakada, M., 176
Nakagawa, T., 654, 658, 662
Nakahara, H., 327
Nakajima, K., 602, 666
Nakamatsu, H., 128
Nakamoto, T., 176
Nakamura, K., 636
Nakamura, Y., 404
Narita, H., 184
Nash, K.L., 257, 712
Nebelung, C., 42
Nierlich, M., 144
Nishi, M., 670
Nishikawa, S., 587
Nishimaki, K., 654, 658, 662
Nishinaka, I., 327
Nitsche, H., 42, 123, 201, 262, 307, 765
Noël, H., 503
Nomura, K., 538
Nunnemann, M., 45, 837, 876

Ochida, M., 400
Ochs, M., 272
Odoj, R., 248
Ogata, T., 597, 636, 670
Ogawa, T., 347, 355, 363, 374, 597, 636, 670
Ohtsuki, T., 327
Ohuchi, K., 391, 400
Okamoto, Y., 355, 374
Ošlovec, M., 495
Omtvedt, J.P., 303
Onoe, J., 128
Ono, F., 625, 702
Ônuki, Y., 482
Oomi, G., 331, 482, 495
Oppeneer, P.M., 486, 831
Oura, Y., 327
Ozawa, M., 159, 538

Pagès, M., 774
Paine, R.T., 172
Panak, P., 262, 746
Papaioannou, D., 573, 610
Paquet, F., 85, 89
Passler, G., 45, 837, 876
Paulus, W., 292, 300
Pechev, S., 448
Perlov, A.Ya., 486, 831
Pershina, V., 283, 292, 300
Peterson, J.R., 676, 837, 876
Piccinato, R., 645
Pietzsch, K., 262
Piguet, D., 287
Pillon, S., 517
Pilviö, R., 49
Pinto, H., 378, 474
Piraux, L., 423
Pirlet, V., 267
Podor, R., 236
Pompe, S., 123
Poncy, J.L., 89
Prabhakara Reddy, B., 395
Prokeš, K., 418, 495

Ramounet, B., 85, 89, 93, 100, 103
Ramsey, J.M., 62
Rance, E., 54
Randall, M.G., 821
Rateau, G., 38
Rebizant, J., 426, 437, 463, 490, 508, 513, 882
Reich, T., 123
Richard, N., 879
Richter, K., 38, 616
Rijkeboer, C., 490
Roessli, B., 433
Rofidal, P., 879
Rogers, R.D., 133
Roisnel, T., 444
Rome, M., 544
Röske, K., 262
Rouault, J., 517
Roussel, P., 150
Roy, J.J., 592

Saeki, M., 176
Saiki, W., 549
Saito, A., 751
Saito, T., 322
Sakai, O., 433
Sakamura, Y., 592, 685
Sakurai, H., 625
Sakurai, S., 58
Salvatores, M., 606
Sanchez, J.-P., 414
Sanda, T., 530
Sarrao, J., 826
Sarrao, J.L., 335
Sasaki, Y., 799
Sato, N., 382, 386, 433, 452
Sato, T., 347
Savilova, O.A., 817
Scapolan, S., 106
Schädel, M., 292, 300, 312
Schaumloffel, J.C., 189
Schausten, B., 292, 300
Schmidt, M.A., 257
Schreier, E., 463
Schumann, D., 300, 307
Scott, P., 150
Šebek, J., 418
Sechovský, V., 418, 495
Seibert, A., 300
Sekine, R., 128
Sekino, H., 670
Selenska-Pobell, S., 262
Serizawa, H., 386
Serrano, J.A., 573
Shaked, H., 378

Shaughnessy, D.K., 292
Shaw, R.W., 62
Shibata, S., 587, 707
Shiokawa, Y., 459, 680
Shirai, O., 685
Shiratori, T., 386
Shiwaku, H., 184, 363
Short, S., 378
Shuh, D.K., 123
Silin, V.I., 803
Silverwood, P.R., 180
Sinkov, S.I., 809
Skarnemark, G., 272, 303
Skriver, H.L., 339
Smith, J.L., 826
Soderholm, L., 846, 882
Somers, J., 616
Spahiu, K., 194
Spino, J., 610
Spirlet, J.C., 426
Stalios, A.D., 513
Stetzer, O., 45, 876
Storvick, T.S., 592
Stout, B.E., 774
Stradling, G.N., 54, 72
Straub, T., 116
Strellis, D.A., 292
Strub, E., 292
Stump, N.A., 854
Sueki, K., 327
Sugimoto, J., 625
Sullivan, J.C., 712
Sunder, S., 568
Suski, W., 499
Suwarno, H., 530, 702
Suzuki, A., 252
Suzuki, K., 459, 680
Suzuki, S., 184
Suzuki, Y., 577, 602, 666, 680, 685
Sylwester, E.R., 292
Szeglowski, Z., 307

Tachimori, S., 128, 184
Tahvildar-Zadeh, A., 826
Takahashi, K., 662
Takahashi, N., 322
Takakuwa, Y., 459
Takanashi, M., 689
Takashima, Y., 693
Takeishi, H., 719
Takeuchi, K., 128
Tanaka, H., 685
Tanaka, S., 252
Tanaka, Y., 159, 538
Tananaev, I., 231
Tananaev, I.G., 813
Tanikawa, M., 327
Taut, S., 307, 316
Taylor, D.M., 112
Taylor, D.M., 6, 85, 112
Taylor, R.J., 180, 534, 650, 817
Thompson, J.D., 335
Thörle, P., 300, 876
Tichý, I., 467
Timofeev, G.A., 782
Timokhin, S.N., 287, 316
Tinker, N., 139
Tinker, N.D., 150
Todoriki, M., 252
Tomiyasu, H., 163, 756
Toscano, E.H., 573
Tran, V.H., 503
Trautmann, N., 45, 303, 837, 876
Trivedi, D.P., 821
Troć, R., 503
Truffier, J.L., 370, 879
Trzaska, W.H., 296
Tsuji, T., 391, 400, 404
Tsukada, K., 327
Tsuzuki, T., 549
Türler, A., 287, 300, 316

Ullrich, W., 31
Uno, M., 641
Urabe, T., 658
Usuda, S., 58, 244

Vambenepe, G., 544, 606
Van Iseghem, P., 267
Vance, E.R., 221
Vasudeva Rao, P.R., 395
Vicens, J., 778
Vitos, L., 339
Vladimirova, M.V., 723
Vogt, O., 426, 508
Volkov, A.Yu., 782

Waerenborgh, J.C., 456
Wagener, W., 463
Wakayama, N., 587
Wakeshima, M., 382, 452
Waldek, A., 45, 837, 876
Walker, C.T., 513
Wallwork, A.L., 534, 817
Wasserman, S.R., 882
Wastin, F., 437, 490, 513
Webb, L.M., 112
Weber, W.J., 240
Wei, Y.-Z., 693
Wenzel, U., 31
Werme, L.O., 194
Wiehl, N., 303
Wierczinski, B., 272, 303
Wiese, H.W., 522
Williams, C.W., 846, 850
Williams, D.R., 112
Wills, J.M., 367
Wochowski, K., 499

Yaita, T., 184
Yakushev, A.B., 287, 307
Yamada, K., 382, 386, 452, 549, 697
Yamada, K., 386, 549
Yamaguchi, K., 625, 629
Yamaguchi, M., 693
Yamamoto, T., 530, 629, 702
Yamamoto, T.A., 654
Yamamura, T., 756
Yamana, H., 587, 707
Yamanaka, S., 549, 697
Yamashita, T., 176, 391, 400, 404
Yamawaki, M., 530, 625, 629, 702
Yaouanc, A., 414
Yaresko, A.N., 486, 831
Yasuda, K., 58
Yasumoto, M., 625
Yavorsky, B.Yu., 486
Yingzhong, C., 742
Yokoyama, A., 322
Yongjun, Z., 742
Yoshida, Z., 790
Young, J.P., 62

Zaitseva, G.N., 786
Zauner, S., 292, 300
Zhang, J., 133
Zhang, L., 19
Zhang, Y., 139
Zhao, Y.L., 327
Zhuravleva, G.I., 817
Zilberman, B.Ya., 534
Zvara, I., 287, 316
Zwirner, S., 426

ELSEVIER

Journal of Alloys and Compounds 271–273 (1998) 891–908

Journal of ALLOYS AND COMPOUNDS

Subject Index of Volumes 271–273

Ab initio theory
anisotropic resistivity and giant magnetoresistance in UNi_2Ge_2 and UNiGa from ab initio calculations 486
Absorption spectra
peculiarities of complex formation of hexavalent Np and Pu with tetrahedral XO_4^{2-} oxoanions (X=S, Se, Cr, Mo) 154
Acid solution
comparative study on the hydration states of Cm(III) and Eu(III) in solution and in cation exchange resin 719
Ac-susceptibility
incommensurate and ferrimagnetic phases in $U(Ni,M)_2Si_2$ with minor M=Co or Cu 474
Ac-susceptibility and neutron diffraction studies of the $URu_{1-x}Pd_xGa$ system 503
Actinide
a fast method for low-level actinide measurement in concrete 42
computer modelling of the chemical speciation of lanthanide and actinide elements in the human gastrointestinal tract 112
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
measurement of standard potentials of actinides (U,Np,Pu,Am) in LiCl–KCl eutectic salt and separation of actinides from rare earths by electrorefining 592
equilibrium distributions of trivalent actinides and lanthanides in the liquid–liquid extraction system of TBP and molten $Ca(NO_3)_2 \cdot 4H_2O$ 707
kinetics of actinide complexation reactions 712
new method for actinide and rare-earth element recovery by diphenyl[dibutylcarbamoylmethyl]phosphine oxide from nitric acid solutions 760
solvent extraction study of actinide elements by *N,N'*-dimethyl-*N,N'*-dihexyl-3-oxapentanediamide and thenoyltrifluoroacetone 799
optical and magneto-optical spectroscopy of uranium and plutonium compounds: recent theoretical progress 831
emission profile of Bk(III) in a silicate matrix: anomalous dependence on excitation power 854
Actinide chemistry
direct disposal of spent nuclear fuel: comparison between experimental and modelled actinide solubiluties in natural waters 194
Actinide complexants
synthesis and characterization of actinide-exchanged Preyssler heteropolyanions $[AnP_5W_{30}O_{110}]^{n-}$ (An=Th, Am, Cm) 846
Actinide compounds
on the characterization of $(U,Np)_xT_yX_z$ intermetallic solid solutions 513
Actinide exchange
synthesis and characterization of actinide-exchanged Preyssler heteropolyanions $[AnP_5W_{30}O_{110}]^{n-}$ (An=Th, Am, Cm) 846
Actinide(III)
steric effect of β-diketone in synergistic extraction of actinide(III) and lanthanide(III) with β-diketone +18-crown-6 ether/1,2-dichloroethane 790
Actinide monochalcogenides
high temperature susceptibilities of actinide monopnictides and monochalcogenides 508
Actinide monopnictides
preparation and electrical resistivity of $(Pu_{1-x}U_x)Sb$ and $(Pu_{1-x}Y_x)Sb$ single crystals 490
high temperature susceptibilities of actinide monopnictides and monochalcogenides 508
Actinide nitride halide
Actinide nitrides and nitride–halides in high-temperature systems 347
Actinide tetrahalides
the vibrational frequencies, molecular geometry and thermodynamic properties of the actinide tetrahalides 583
Actinide vaporization
high-temperature transuranium organometallic species from laser ablation of actinide–polymer mixtures 359
Actinides
the bioinorganic chemistry of actinides in blood 6
separation of actinides from a bone ash matrix with extraction chromatography 49
determination of actinide isotope ratios using glow discharge optogalvanic spectroscopy 62
issues and research on the biochemistry of inhaled actinides 66
decorporation of actinides: a review of recent research 72
biotransformation of uranium and other actinides in radioactive wastes 78
the bioinorganic chemistry of Np, Pu and Am in mammalian liver 85
peculiarities of complex formation of hexavalent Np and Pu with tetrahedral XO_4^{2-} oxoanions (X=S, Se, Cr, Mo) 154
trivalent minor actinides/lanthanides separation, using organophosphinic acids 159
complex formation of divalent lanthanides and actinides 168
Actinide immobilization in the subsurface environment by in-situ treatment with a hydrolytically unstable organophosphorus complexant: Uranyl uptake by calcium phytate 257
pressure effects on magnetism in the uranium and neptunium monopnictides 426
Actinide transmutation properties of thermal and fast fission reactors including multiple recycling 522
thermodynamics of reductive extraction of actinides and lanthanides from molten chloride salt into liquid metal 587
modeling and estimating the distribution of trivalent actinides and lanthanides between molten fluorides and liquid metal 645
separation of actinides from simulated spent fuel solutions by an advanced ion-exchange process 693
recent achievements of actinide radiation chemistry 723
thermodynamics of actinide redox reactions in potassium phosphotungstate solutions 782
determination of the first ionization potential of nine actinide elements by resonance ionization mass spectroscopy (RIMS) 837
electronic structure of f^1 actinide complexes. Part 3 of [1]. Quasi-

Elsevier Science S.A.
PII: S0925-8388(98)00623-9

relativistic density functional calculations of the optical transition energies of PaX_6^{2-} (X=F, Cl, Br, I) 859
Actinides fission
experimental verification of two deformation paths in the mass division process of actinides 327
Actinides lanthanides separation
the separation of trivalent actinides from lanthanides by dithiophosphinic acids from HNO_3 acid medium 248
Actinides oxides
Actinide transmutation: new investigation on some actinide compounds 557
Actinyl nitrate
electronic structures of actinyl nitrate–triethyl phosphate complexes using the DV–DS method 128
Activation parameters
kinetics of actinide complexation reactions 712
Adsorption
thermochromatography of heavy actinides adsorption of No-259 on Ti, V, Nb, Ta and Mo 316
separation of actinides from simulated spent fuel solutions by an advanced ion-exchange process 693
Adsorption isotherms
distribution of uranium on zeolite X and investigation of thermodynamic parameters for this system 769
Aliquat 336–HCl
extraction of the fluoride-, chloride- and bromide complexes of the elements Nb, Ta, Pa, and 105 into aliphatic amines 292
Aliquat 336–HF
extraction of the fluoride-, chloride- and bromide complexes of the elements Nb, Ta, Pa, and 105 into aliphatic amines 292
Alkaline solution
capture of Pu(V), Np(V) and Pu(VI) from alkaline solutions by hydroxides of Pu(IV), Th(IV) and La(III) 231
Alkaline solutions
behavior of plutonium(V) in alkaline media 813
Alloys
high-pressure X-ray diffraction studies of Cm–Bk alloys: contribution to the actinide pressure-phase diagram 342
enthalpies of formation of UGa_2 and UGa_3 by calorimetry 395
Alpha-spectrometry
alpha-spectrometry measurement of Am and Cm at trace levels in environmental samples using extraction chromatography 25
Alveolar macrophage
chemical composition of inhalable MOX powders prepared according to a SOLGEL process: energy dispersive X-ray analysis of individual particles 38
issues and research on the biochemistry of inhaled actinides 66
Amalgam
electrochemical preparation of high purity uranium and neptunium metals from aqueous solutions 680
Americium
alpha-spectrometry measurement of Am and Cm at trace levels in environmental samples using extraction chromatography 25
lysimeter studies to investigate the leaching of ^{241}Am from low level radioactive waste 227
the EFTTRA experiment on irradiation of Am targets 606
the influence of americium oxide inclusions on the thermal conductivity of inert-matrix fuel 632
extraction of americium and lanthanides by dialkyldithiophosphinic acid and f-f absorption spectra of the extraction complexes 742
Americium adsorption
applicability of insoluble tannin to treatment of waste containing americium 244
Americium extraction
coordination chemistry and extraction properties of phosphonopyridyl N,P oxides 172
Americium(III)
luminescence study on determination of the inner-sphere hydration number of Am(III) and Nd(III) 867
Amide
structural study of holmium (III) and uranium (VI) organic ligand complexes by extended X-ray absorbtion fine-structure spectroscopy 184
Amides
uranium amides as precursors to cationic and/or pentavalent compounds 144
Ammonia
thermodynamics of nitrogen-rich uranium sesquinitride formation by reaction of uranium monocarbide with ammonia 654
the formation of uranium sesquinitride by reactions of U or UH_3 with a N_2–H_2 mixture 662
AmN
Actinide nitrides and nitride–halides in high-temperature systems 347
Amorphous alloy
preparation of uranium-based magnetic amorphous alloys by RF sputtering 459
Analysis
thermodynamic aspects of heavy fermion compounds under high pressure 331
Anhydrous solvents
chloride and pseudohalide complexes of thorium in anhydrous solvents 786
An(III)/Ln(III) separation
Am (III)/Eu (III) separation at low pH using synergistic mixtures composed of carboxylic acids and neutral nitrogen polydendate ligands 738
$AnO_2(NO_3)_2 \cdot 2TEP$
electronic structures of actinyl nitrate–triethyl phosphate complexes using the DV–DS method 128
Aqueous chemistry
sorption behaviour of rutherfordium and thorium from HCl/Hf containing aqueous solution 307
ARCA
chromatographic studies of Rf (element 104) with tributylphosphate (TBP) 300
Aromatic polycarboxylic acids
complexation of NpO_2^+ by aromatic polycarboxylates 774
Atomic volumes
local density approximation versus generalized gradient approximation: full charge density study of the atomic volume of the light actinides 339
Autoradiograph
the effect of a delayed chronic DTPA treatment on the Pu microdistribution in rat bone: preliminary results using hemi-blocks of femurs 93

Berkelium
enthalpy of solution of californium oxychloride; calculation of the standard enthalpy of formation of CfOCl 676
emission profile of Bk(III) in a silicate matrix: anomalous dependence on excitation power 854
Bidentate coordination
determination of structural parameters of uranyl ions complexed with organic acids using EXAFS 123
Bimode fission
experimental verification of two deformation paths in the mass division process of actinides 327
Bioaccumulation
bacteria from uranium mining waste pile: interactions with U(VI) 262
Biochemistry
the bioinorganic chemistry of Np, Pu and Am in mammalian liver 85

Biokinetics
experimental approaches to improve the available chelator treatments for Np decorporation 89
early biokinetics of actinides after intravenous administration of soluble forms of Pu(IV), Np(IV) and Np(V) 103
Biological ligands
extraction of Pu from rat bone by formic acid/guanidine treatment after intravenous ^{238}Pu-citrate administration: influence of time after contamination and of a chronic DTPA treatment 100
Biotransformation
biotransformation of uranium and other actinides in radioactive wastes 78
Bk
high-pressure X-ray diffraction studies of Cm–Bk alloys: contribution to the actinide pressure-phase diagram 342
Blood
the bioinorganic chemistry of actinides in blood 6
investigations by time-resolved laser-induced fluorescence and capillary electrophoresis of the uranyl–phosphate species: application to blood serum 106
Bonding
triamidoamine complexes of the actinides; from mixed-valence bimetallics to dinitrogen activation 150
Bone
separation of actinides from a bone ash matrix with extraction chromatography 49
the effect of a delayed chronic DTPA treatment on the Pu microdistribution in rat bone: preliminary results using hemi-blocks of femurs 93
extraction of Pu from rat bone by formic acid/guanidine treatment after intravenous ^{238}Pu-citrate administration: influence of time after contamination and of a chronic DTPA treatment 100
Bronze
crystal structure and magnetic susceptibility of uranium palladium sulfide bronze, $U_xPd_yS_4$ 452
n-butyraldehyde
neptunium concentration profiles in the Purex process 689

Californium
enthalpy of solution of californium oxychloride; calculation of the standard enthalpy of formation of CfOCl 676
Calixarene
solvent extraction of U(VI) from media containing competing anions and metal cations by a calix[6]arene bearing carboxy groups 778
Calorimetry
enthalpies of formation of UGa_2 and UGa_3 by calorimetry 395
Capillary electrophoresis
investigations by time-resolved laser-induced fluorescence and capillary electrophoresis of the uranyl–phosphate species: application to blood serum 106
Capture
capture of Pu(V), Np(V) and Pu(VI) from alkaline solutions by hydroxides of Pu(IV), Th(IV) and La(III) 231
Carbon-12
fission mechanisms in the carbon-induced fission of uranium 322
Carboxylate
uranyl monopicolinate complexes 180
Carboxylate ions
determination of structural parameters of uranyl ions complexed with organic acids using EXAFS 123
Carboxylates
coordination chemistry of neptunyl(V) compounds by means of Mössbauer spectroscopy 176
Catalysis
designing new catalytic C–C and C–N bond formations promoted by organoactinides 116
Catalyst
the formation of uranium sesquinitride by reactions of U or UH_3 with a N_2–H_2 mixture 662
Cation exchange resin
comparative study on the hydration states of Cm(III) and Eu(III) in solution and in cation exchange resin 719
Cation valency
effect of cations on lattice constants of $(M_xU_{1-x})O_{2.00}$ (M=Pu, Th, La) at low doped cation concentrations 391
Cations
uranium amides as precursors to cationic and/or pentavalent compounds 144
C–C bond formation
designing new catalytic C–C and C–N bond formations promoted by organoactinides 116
Cement
solubility measurements and sorption studies of thorium in cement pore water 272
CERCER
the influence of americium oxide inclusions on the thermal conductivity of inert-matrix fuel 632
$CeRh_{2-x}Ru_xSi_2$
correlated f-electron materials near a $T=0$ magnetic–nonmagnetic boundary: implications for δ-Pu 335
Cerium (IV)
investigation of thorium(IV) separation from cerium(IV) on a silica gel column coated with tri-octylphosphine oxide 620
Charge dispersion
fission mechanisms in the carbon-induced fission of uranium 322
Chelating agents
experimental approaches to improve the available chelator treatments for Np decorporation 89
the effect of a delayed chronic DTPA treatment on the Pu microdistribution in rat bone: preliminary results using hemi-blocks of femurs 93
extraction of Pu from rat bone by formic acid/guanidine treatment after intravenous ^{238}Pu-citrate administration: influence of time after contamination and of a chronic DTPA treatment 100
Chemical potential diagram
thermodynamic assessment of the Fe–U, U–Zr and Fe–U–Zr systems 636
Chemical properties
review of the SISAK system in transactinide research recent developments and future prospects 303
Chemical speciation
computer modelling of the chemical speciation of lanthanide and actinide elements in the human gastrointestinal tract 112
Cm
high-pressure X-ray diffraction studies of Cm–Bk alloys: contribution to the actinide pressure-phase diagram 342
CMPO
structural study of holmium (III) and uranium (VI) organic ligand complexes by extended X-ray absorbtion fine-structure spectroscopy 184
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
new method for actinide and rare-earth element recovery by diphenyl[dibutylcarbamoylmethyl]phosphine oxide from nitric acid solutions 760
C–N bond formation
designing new catalytic C–C and C–N bond formations promoted by organoactinides 116
^{13}C NMR
structural studies on monomeric and dimeric uranyl bis(dimethylmalonato)complexes 139
Co-decontamination step
neptunium concentration profiles in the Purex process 689

Complex formation
complex formation of divalent lanthanides and actinides 168
recent progress in theoretical investigations of the electronic structure of the transactinides 283
interaction of uranium(VI) with silicic acid in aqueous solutions studied by time-resolved laser-induced fluorescence spectroscopy (TRLFS) 765
Complex structure in solution
structural study of holmium (III) and uranium (VI) organic ligand complexes by extended X-ray absorbtion fine-structure spectroscopy 184
Complexation
uranium speciation in waters of different uranium mining areas 201
complexation of Th (IV) with the siderophore pyoverdine A 206
the investigation of the neptunium complexes formed upon interaction of high level waste glass and Boom Clay media 267
the applications of formo- and aceto-hydroxamic acids in nuclear fuel reprocessing 534
the formation of hydrophilic Np(IV) complexes and their potential application in nuclear fuel reprocessing 650
kinetics of actinide complexation reactions 712
a complexation study of Cm(III) and Tb(III) with chelating aromatic ligands by time-resolved laser fluorescence spectroscopy 746
complexation of uranyl(VI) with polyoxometalates in aqueous solutions 751
Complexation equilibria
complexation behavior of Pu(IV) and Pu(VI) with urea in nitric acid solution 809
Computer modelling
computer modelling of the chemical speciation of lanthanide and actinide elements in the human gastrointestinal tract 112
Concrete
a fast method for low-level actinide measurement in concrete 42
Content and speciation in environment
up-to-date radioecological situation around the 'Mayak' nuclear facility 216
Coordination complex
coordination chemistry and extraction properties of phosphonopyridyl N,P oxides 172
Coordination number
coordination chemistry of neptunyl(V) compounds by means of Mössbauer spectroscopy 176
Corrosion
XPS and XRD studies of corrosion of uranium nitride by water 568
CPMAS
structural studies on monomeric and dimeric uranyl bis(dimethylmalonato)complexes 139
18-Crown-6
crown ether complexes of $UO_2(NCS)_2$ and $Th(NCS)_4$: clues to solution behavior or just interesting supramolecular structures? 133
Crown ether
steric effect of β-diketone in synergistic extraction of actinide(III) and lanthanide(III) with β-diketone +18-crown-6 ether/1,2-dichloroethane 790
Crystal field theory
spectroscopy and dynamics of 5f states of Es^{3+} in LaF_3 850
Crystal structure
local structure of (U,Zr)Pd_3 by EXAFS 363
crystal structure and magnetic susceptibility of uranium palladium sulfide bronze, $U_xPd_3S_4$ 452
Crystal structures
crown ether complexes of $UO_2(NCS)_2$ and $Th(NCS)_4$: clues to solution behavior or just interesting supramolecular structures? 133
Cs_2UO_4
thermodynamic study of the vaporization of Cs_2UO_4 by high temperature mass spectrometry 625
Curie temperature
magnetic properties of the $U_{1-x}Gd_xNi_2$ system 471
Curium
alpha-spectrometry measurement of Am and Cm at trace levels in environmental samples using extraction chromatography 25
spectroscopic evaluation of thermodynamics of trivalent actinides in brines 728
a complexation study of Cm(III) and Tb(III) with chelating aromatic ligands by time-resolved laser fluorescence spectroscopy 746
Curium(III)
comparative study on the hydration states of Cm(III) and Eu(III) in solution and in cation exchange resin 719
Cyanex 301
trivalent minor actinides/lanthanides separation, using organophosphinic acids 159
Cyclic voltammetry
synthesis and characterization of actinide-exchanged Preyssler heteropolyanions $[AnP_5W_{30}O_{110}]^{n-}$ (An=Th, Am, Cm) 846
Cyclic voltammogram
measurement of standard potentials of actinides (U,Np,Pu,Am) in LiCl–KCl eutectic salt and separation of actinides from rare earths by electrorefining 592
electrochemical behavior of actinide ions in LiCl–KCl eutectic melts 685

Deactivation
deactivation and luminescence lifetimes of excited uranyl ion and its fluoro complexes 756
α-Decays
first aqueous chemistry with seaborgium (element 106) 312
Decorporation
decorporation of actinides: a review of recent research 72
experimental approaches to improve the available chelator treatments for Np decorporation 89
Delta phase
interdiffusion in the U–Zr system at δ-phase compositions 597
Density
preparation, analysis and irradiation of hydrided U–Th–Zr alloy samples for a new fuel 702
Density functional theory
local density approximation versus generalized gradient approximation: full charge density study of the atomic volume of the light actinides 339
electronic structure of f^1 actinide complexes. Part 3 of [1]. Quasi-relativistic density functional calculations of the optical transition energies of PaX_6^{2-} (X=F, Cl, Br, I) 859
Diamide
solvent extraction study of actinide elements by *N,N'*-dimethyl-*N,N'*-dihexyl-3-oxapentanediamide and thenoyltrifluoroacetone 799
Dibenzoatodioxouranium(VI)
determination of structural parameters of uranyl ions complexed with organic acids using EXAFS 123
β-Diketone
steric effect of β-diketone in synergistic extraction of actinide(III) and lanthanide(III) with β-diketone +18-crown-6 ether/1,2-dichloroethane 790
Dimethyl sulfoxide
electrochemical studies on bis(β-diketonato)(dimethyl sulfoxide)dioxouranium(VI) in dimethyl sulfoxide 163

Dimethylmalonato
structural studies on monomeric and dimeric uranyl bis(dimethylmalonato)complexes 139
Dinitrogen
triamidoamine complexes of the actinides; from mixed-valence bimetallics to dinitrogen activation 150
Diode lasers
determination of actinide isotope ratios using glow discharge optogalvanic spectroscopy 62
Diphosphine dioxide
structural study of holmium (III) and uranium (VI) organic ligand complexes by extended X-ray absorbtion fine-structure spectroscopy 184
Dispersal
oxidation kinetics of plutonium in air: consequences for environmental dispersal 211
Disproportionation
behavior of plutonium(V) in alkaline media 813
Distribution
modeling and estimating the distribution of trivalent actinides and lanthanides between molten fluorides and liquid metal 645
Dithiophosphinic acids
the separation of trivalent actinides from lanthanides by dithiophosphinic acids from HNO_3 acid medium 248
DTPA
decorporation of actinides: a review of recent research 72
the effect of a delayed chronic DTPA treatment on the Pu microdistribution in rat bone: preliminary results using hemi-blocks of femurs 93
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
Dual porosity
lysimeter studies to investigate the leaching of ^{241}Am from low level radioactive waste 227
DV–DS method
electronic structures of actinyl nitrate–triethyl phosphate complexes using the DV–DS method 128

EFTTRA
the EFTTRA experiment on irradiation of Am targets 606
Einsteinium
spectroscopy and dynamics of 5f states of Es^{3+} in LaF_3 850
determination of the first ionization potential of einsteinium by resonance ionization mass spectroscopy (RIMS) 876
Elastic modulus
mechanical properties of $(U,Ce)O_2$ 697
Electrical conductivity
electrical conductivity of uranium–neptunium mixed oxides 400
Electrical properties
structure, magnetic and electrical properties of the $UMn_{4-x}Fe_xAl_8$ system 499
Electrical resistance
thermodynamic aspects of heavy fermion compounds under high pressure 331
Electrical resistivity
critical electron scattering in UGe_2 near the magnetic phase transition induced by pressure 482
Electrochemical reactions
electrochemical studies on bis(β-diketonato)(dimethyl sulfoxide)dioxouranium(VI) in dimethyl sulfoxide 163
Electrodeposition
electrochemical behavior of actinide ions in LiCl–KCl eutectic melts 685
5-f electrons
local structure of $(U,Zr)Pd_3$ by EXAFS 363
Electron paramagnetic resonance (EPR)
crystal structure of distorted fluorite-type SrU_2O_6 with pentavalent uranium 479
Electronic absorption spectra
synthesis and characterization of strontium pentachlorouranate(III) and dibarium heptachlorouranate(III) 863
Electronic structure
electronic structures of actinyl nitrate–triethyl phosphate complexes using the DV–DS method 128
ARPES in strongly correlated 4f and 5f systems: Comparison to the Periodic Anderson Model (PAM) 826
thin layers in actinide research 841
electronic structure of f^1 actinide complexes. Part 3 of [1]. Quasi-relativistic density functional calculations of the optical transition energies of PaX_6^{2-} (X=F, Cl, Br, I) 859
Electrorefining
development of transuranium elements recovery from high-level radioactive liquid waste 563
measurement of standard potentials of actinides (U,Np,Pu,Am) in LiCl–KCl eutectic salt and separation of actinides from rare earths by electrorefining 592
Elution
separation of actinides from simulated spent fuel solutions by an advanced ion-exchange process 693
EMF
stability of UNCl in LiCl–KCl eutectic melt 374
α- and β-emitter
simple on-line monitoring of α- and β-emitters by solid scintillation counting 31
Energy dispersive X-ray spectrometry
chemical composition of inhalable MOX powders prepared according to a SOLGEL process: energy dispersive X-ray analysis of individual particles 38
Enthalpy
enthalpies of formation of UGa_2 and UGa_3 by calorimetry 395
enthalpy of solution of californium oxychloride; calculation of the standard enthalpy of formation of CfOCl 676
Environment remediation
Actinide immobilization in the subsurface environment by in-situ treatment with a hydrolytically unstable organophosphorus complexant: Uranyl uptake by calcium phytate 257
Environmental contamination
alpha-spectrometry measurement of Am and Cm at trace levels in environmental samples using extraction chromatography 25
Environmental sampling
strengthening IAEA safeguards through environmental sampling and analysis 11
EPMA
on the characterization of $(U,Np)_xT_yX_z$ intermetallic solid solutions 513
interdiffusion in the U–Zr system at δ-phase compositions 597
Equilibrium constant
complexation of Th (IV) with the siderophore pyoverdine A 206
Estimating
modeling and estimating the distribution of trivalent actinides and lanthanides between molten fluorides and liquid metal 645
Eu^{3+}
isotope and temperature effects on photochemical reactions of uranyl ion in H_2O–D_2O mixtures 794
Europium(III)
comparative study on the hydration states of Cm(III) and Eu(III) in solution and in cation exchange resin 719
Eutectic melt
stability of UNCl in LiCl–KCl eutectic melt 374
EXAFS
structural study of holmium (III) and uranium (VI) organic ligand complexes by extended X-ray absorbtion fine-structure spectroscopy 184
local structure of $(U,Zr)Pd_3$ by EXAFS 363
calculated lattice relaxation in Pu-Ga alloys 367

PuGa alloys: an X-ray absorption study 879
Exchange and correlation energy
local density approximation versus generalized gradient approximation: full charge density study of the atomic volume of the light actinides 339
Excitation functions
production of plutonium tracers in ^{237}Np nuclear reactions with ^{3}He-ions in the energy range from 26 to 60 MeV 296
Experimental Feasibility of Targets for Transmutation
the EFTTRA experiment on irradiation of Am targets 606
Experimental results
the interaction of Np(V), Pu(VI) and Tc(VII) with metal in alkaline solutions 803
Exposure limits
exposure limits and assessment of intake for inhaled soluble uranium compounds 54
Extended X-ray absorption fine structure spectroscopy
determination of structural parameters of uranyl ions complexed with organic acids using EXAFS 123
Extent of dissociation
thermodynamics of nitrogen-rich uranium sesquinitride formation by reaction of uranium monocarbide with ammonia 654
Extraction
chromatographic studies of Rf (element 104) with tributylphosphate (TBP) 300
Am (III)/Eu (III) separation at low pH using synergistic mixtures composed of carboxylic acids and neutral nitrogen polydendate ligands 738
extraction of americium and lanthanides by dialkyldithiophosphinic acid and f-f absorption spectra of the extraction complexes 742
Extraction chromatography
separation of actinides from a bone ash matrix with extraction chromatography 49
extraction of the fluoride-, chloride- and bromide complexes of the elements Nb, Ta, Pa, and 105 into aliphatic amines 292
investigation of thorium(IV) separation from cerium(IV) on a silica gel column coated with tri-octylphosphine oxide 620
Extraction complex
extraction of americium and lanthanides by dialkyldithiophosphinic acid and f-f absorption spectra of the extraction complexes 742

Fabrication
fabrication of transmutation and incineration targets by infiltration of porous pellets by radioactive solutions 616
Fast chemistry
chemistry gains a new element: Z=106 277
Fast fission
fission mechanisms in the carbon-induced fission of uranium 322
Fast reactor
concept of hydride fuel target subassemblies in a fast reactor core for effective transmutation of MA 530
Fast reactors
nuclear fuels for actinides burning CAPRA and SPIN programmes status 517
Ferromagnetism
magnetic structure of the ternary germanide $U_3Cu_4Ge_4$ 448
magnetic properties of the $U_{1-x}Gd_xNi_2$ system 471
critical electron scattering in UGe_2 near the magnetic phase transition induced by pressure 482
Fe–U
thermodynamic assessment of the Fe–U, U–Zr and Fe–U–Zr systems 636
Fe–U–Zr
thermodynamic assessment of the Fe–U, U–Zr and Fe–U–Zr systems 636
F-f absorption spectra
extraction of americium and lanthanides by dialkyldithiophosphinic acid and f-f absorption spectra of the extraction complexes 742
First ionization potential
determination of the first ionization potential of nine actinide elements by resonance ionization mass spectroscopy (RIMS) 837
determination of the first ionization potential of einsteinium by resonance ionization mass spectroscopy (RIMS) 876
First-principles calculations
optical and magneto-optical spectroscopy of uranium and plutonium compounds: recent theoretical progress 831
Fission product
phase equilibria in the ternary URu_3–URh_3–UPd_3 system 641
Fission products
influence of low temperature air oxidation on the dissolution behaviour of UO_2 and MOX spent fuel 573
Fluorescence
a complexation study of Cm(III) and Tb(III) with chelating aromatic ligands by time-resolved laser fluorescence spectroscopy 746
Fluorescence spectroscopy
spectroscopic evaluation of thermodynamics of trivalent actinides in brines 728
interaction of uranium(VI) with silicic acid in aqueous solutions studied by time-resolved laser-induced fluorescence spectroscopy (TRLFS) 765
Fluoride complexes
chemistry gains a new element: Z=106 277
Fluorite structure
crystal structure of distorted fluorite-type SrU_2O_6 with pentavalent uranium 479
Formal potential
behavior of plutonium(V) in alkaline media 813
Fracture toughness
mechanical properties of $(U,Ce)O_2$ 697
Fuels
nuclear fuels for actinides burning CAPRA and SPIN programmes status 517

Gallium
calculated lattice relaxation in Pu-Ga alloys 367
Geochemical modelling/speciation
criteria for compilation of a site-specific thermodynamic database for geochemical speciation calculations 821
Glass
emission profile of Bk(III) in a silicate matrix: anomalous dependence on excitation power 854
Glass leaching
the investigation of the neptunium complexes formed upon interaction of high level waste glass and Boom Clay media 267
Glow discharge
determination of actinide isotope ratios using glow discharge optogalvanic spectroscopy 62
Gruneisen parameter
correlated f-electron materials near a $T=0$ magnetic–nonmagnetic boundary: implications for δ-Pu 335

Halides
evidence for relativistic effects in the chemistry of element 104 287
HCl/HF solution
sorption behaviour of rutherfordium and thorium from HCl/Hf containing aqueous solution 307

Heat capacity
thermal expansion of neptunium–plutonium mixed oxides 404
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
Heavy fermion
thermodynamic aspects of heavy fermion compounds under high pressure 331
observation of two low-energy responses in UPd_2Al_3—interaction of magnetism and superconductivity? 433
Heavy fermions
ARPES in strongly correlated 4f and 5f systems: Comparison to the Periodic Anderson Model (PAM) 826
Heavy fermion systems
synchrotron radiation as a probe of actinide magnetism (T7-Al 'Magnetism') 408
Heavy-ion fission
fission mechanisms in the carbon-induced fission of uranium 322
Hellman-Feynman
calculated lattice relaxation in Pu-Ga alloys 367
Hemimellitate complexation
complexation of NpO_2^+ by aromatic polycarboxylates 774
^{3}He-particle induced nuclear reactions
production of plutonium tracers in ^{237}Np nuclear reactions with ^{3}He-ions in the energy range from 26 to 60 MeV 296
Heteropolyoxometalate clusters
synthesis and characterization of actinide-exchanged Preyssler heteropolyanions $[AnP_5W_{30}O_{110}]^{n-}$ (An=Th, Am, Cm) 846
High-level radioactive waste glass
U and Pu L_{III} XAFS of Pu-doped glass and ceramic waste forms 240
High pressure
thermodynamic aspects of heavy fermion compounds under high pressure 331
pressure effects on magnetism in the uranium and neptunium monopnictides 426
critical electron scattering in UGe_2 near the magnetic phase transition induced by pressure 482
High purity metal
electrochemical preparation of high purity uranium and neptunium metals from aqueous solutions 680
High temperature
unusual variation of temperature factor of uranium dioxide at high temperature 386
phase characterisation of simulated high burn-up UO_2 fuel 610
High temperature X-ray diffraction
structure and dynamic properties of molten uranium trichloride 355
H_2O–D_2O mixtures
isotope and temperature effects on photochemical reactions of uranyl ion in H_2O–D_2O mixtures 794
HLLW
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
Human gastrointestinal tract
computer modelling of the chemical speciation of lanthanide and actinide elements in the human gastrointestinal tract 112
Humic acid
the investigation of the neptunium complexes formed upon interaction of high level waste glass and Boom Clay media 267
Hydrate melt
equilibrium distributions of trivalent actinides and lanthanides in the liquid–liquid extraction system of TBP and molten $Ca(NO_3)_2 \cdot 4H_2O$ 707
Hydration
equilibrium distributions of trivalent actinides and lanthanides in the liquid–liquid extraction system of TBP and molten $Ca(NO_3)_2 \cdot 4H_2O$ 707
Hydrazine carbonate
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
Hydrazine oxalate
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
Hydride reactor fuel
concept of hydride fuel target subassemblies in a fast reactor core for effective transmutation of MA 530
Hydroamination
designing new catalytic C–C and C–N bond formations promoted by organoactinides 116
Hydrogen
hydrogen absorption properties of U_6Mn and U_6Ni 629
Hydrogenation
preparation, analysis and irradiation of hydrided U–Th–Zr alloy samples for a new fuel 702
Hydroxamates
the applications of formo- and aceto-hydroxamic acids in nuclear fuel reprocessing 534

Immobilisation
the incorporation of plutonium and neptunium in zirconolite and perovskite 221
Improved TRUEX
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
Inert matrices
inert matrices for the transmutation of actinides: fabrication, thermal properties and radiation stability of ceramic materials 544
Infiltration
fabrication of transmutation and incineration targets by infiltration of porous pellets by radioactive solutions 616
Inhomogeneous line broadening
effects of self-radiation damage on electronic properties of $^{244}Cm^{3+}$ in an orthophosphate crystal of YPO_4 872
Inner-sphere hydration number
comparative study on the hydration states of Cm(III) and Eu(III) in solution and in cation exchange resin 719
luminescence study on determination of the inner-sphere hydration number of Am(III) and Nd(III) 867
Insoluble tannin
applicability of insoluble tannin to treatment of waste containing americium 244
Intake assessment
exposure limits and assessment of intake for inhaled soluble uranium compounds 54
Interdiffusion
interdiffusion in the U–Zr system at δ-phase compositions 597
Intermetallic compound
hydrogen absorption properties of U_6Mn and U_6Ni 629
phase equilibria in the ternary URu_3–URh_3–UPd_3 system 641
Intermetallic compounds
mechanical and thermal properties of uranium intermetallic compounds 549
Intermetallics
UFe_2Zn_{20}: a new uranium intermetallic compound 456
Internal dosimetry
the use of SIMS for uranium localization in biological research 19
In vivo dissolution
issues and research on the biochemistry of inhaled actinides 66
Ion exchange
sorption behaviour of rutherfordium and thorium from HCl/Hf containing aqueous solution 307
separation of actinides from simulated spent fuel solutions by an advanced ion-exchange process 693

Iron-oxidizing bacteria
bacteria from uranium mining waste pile: interactions with U(VI) 262
Irradiation
irradiation behavior of microspheres of U-Zr alloys 670
Irradiation damage
Actinide transmutation: new investigation on some actinide compounds 557
Isomer shift
coordination chemistry of neptunyl(V) compounds by means of Mössbauer spectroscopy 176
Isotope ratio
determination of actinide isotope ratios using glow discharge optogalvanic spectroscopy 62

Kinetics
oxidation kinetics of plutonium in air: consequences for environmental dispersal 211
kinetics of actinide complexation reactions 712
the oxidation of neptunium(IV) by nitric acid in 100% TBP and diluted TBP/*n*-dodecane solutions 817
Knudsen effusion mass spectrometry
vaporization behavior of (Np,Pu)N 666

Lanthanide
computer modelling of the chemical speciation of lanthanide and actinide elements in the human gastrointestinal tract 112
structural study of holmium (III) and uranium (VI) organic ligand complexes by extended X-ray absorbtion fine-structure spectroscopy 184
equilibrium distributions of trivalent actinides and lanthanides in the liquid–liquid extraction system of TBP and molten $Ca(NO_3)_2 \cdot 4H_2O$ 707
new method for actinide and rare-earth element recovery by diphenyl[dibutylcarbamoylmethyl]phosphine oxide from nitric acid solutions 760
Lanthanide(III)
steric effect of β-diketone in synergistic extraction of actinide(III) and lanthanide(III) with β-diketone +18-crown-6 ether/1,2-dichloroethane 790
Lanthanide metal
electrochemical preparation of high purity uranium and neptunium metals from aqueous solutions 680
Lanthanides
trivalent minor actinides/lanthanides separation, using organophosphinic acids 159
complex formation of divalent lanthanides and actinides 168
thermodynamics of reductive extraction of actinides and lanthanides from molten chloride salt into liquid metal 587
modeling and estimating the distribution of trivalent actinides and lanthanides between molten fluorides and liquid metal 645
extraction of americium and lanthanides by dialkyldithiophosphinic acid and f-f absorption spectra of the extraction complexes 742
Lattice constant
effect of cations on lattice constants of $(M_xU_{1-x})O_{2.00}$ (M=Pu, Th, La) at low doped cation concentrations 391
Lattice parameter
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
phase characterisation of simulated high burn-up UO_2 fuel 610
Lattice volume
electronic properties of UPdSn diluted by Lu 418
Leaching
influence of low temperature air oxidation on the dissolution behaviour of UO_2 and MOX spent fuel 573
Lifetime
deactivation and luminescence lifetimes of excited uranyl ion and its fluoro complexes 756
Ligand
kinetics of actinide complexation reactions 712
Ligands
coordination chemistry and extraction properties of phosphonopyridyl N,P oxides 172
Light actinides
local density approximation versus generalized gradient approximation: full charge density study of the atomic volume of the light actinides 339
Liquid–liquid extraction
review of the SISAK system in transactinide research recent developments and future prospects 303
Liquid metal
thermodynamics of reductive extraction of actinides and lanthanides from molten chloride salt into liquid metal 587
LMTO
calculated lattice relaxation in Pu-Ga alloys 367
Low-level radiation
a fast method for low-level actinide measurement in concrete 42
Low Level Radioactive Waste
lysimeter studies to investigate the leaching of ^{241}Am from low level radioactive waste 227
Lu
electronic properties of UPdSn diluted by Lu 418
Luminescence
deactivation and luminescence lifetimes of excited uranyl ion and its fluoro complexes 756
emission profile of Bk(III) in a silicate matrix: anomalous dependence on excitation power 854
Luminescence lifetime
comparative study on the hydration states of Cm(III) and Eu(III) in solution and in cation exchange resin 719
luminescence study on determination of the inner-sphere hydration number of Am(III) and Nd(III) 867
Lungs
chemical composition of inhalable MOX powders prepared according to a SOLGEL process: energy dispersive X-ray analysis of individual particles 38
LWR MOX fuel
influence of low temperature air oxidation on the dissolution behaviour of UO_2 and MOX spent fuel 573
LWR UO_2 fuel
influence of low temperature air oxidation on the dissolution behaviour of UO_2 and MOX spent fuel 573
Lysimeter
lysimeter studies to investigate the leaching of ^{241}Am from low level radioactive waste 227

Magnetic moment
magnetic properties of the $U_{1-x}Gd_xNi_2$ system 471
Magnetic moments
synchrotron radiation as a probe of actinide magnetism (T7-Al 'Magnetism') 408
Magnetic phase diagram
magnetic structures of the ternary stannide $U_2(Ni_{0.70}Pd_{0.30})_2Sn$ 444
Ac-susceptibility and neutron diffraction studies of the $URu_{1-x}Pd_xGa$ system 503
Magnetic phase diagrams
incommensurate and ferrimagnetic phases in $U(Ni,M)_2Si_2$ with minor M=Co or Cu 474
Magnetic properties
structure, magnetic and electrical properties of the $UMn_{4-x}Fe_xAl_8$ system 499
Magnetic structure
magnetic structure of the ternary germanide $U_3Cu_4Ge_4$ 448

Magnetic structures
magnetic structures of the ternary stannide $U_2(Ni_{0.70}Pd_{0.30})_2Sn$ 444
Magnetic susceptibilities
synthesis and characterization of strontium pentachlorouranate(III) and dibarium heptachlorouranate(III) 863
Magnetic susceptibility
crystal structure and magnetic susceptibility of uranium palladium sulfide bronze, $U_xPd_3S_4$ 452
Magnetisation
magnetic properties of the $U_{1-x}Gd_xNi_2$ system 471
Magnetism
orbital and spin moments in uranium compounds from X-ray magnetic circular dichroism 414
pressure effects on magnetism in the uranium and neptunium monopnictides 426
preparation of uranium-based magnetic amorphous alloys by RF sputtering 459
magnetic order in NpO_2 and UO_2 studied by muon spin rotation 463
high temperature susceptibilities of actinide monopnictides and monochalcogenides 508
Magnetoelastic phenomena
magnetic phases and magnetoelastic phenomena in UNiGa under pressure 495
Magneto-optic
magneto-optical investigations of URhAl intermetallic compound 467
Magnetoresistance
anisotropic resistivity and giant magnetoresistance in UNi_2Ge_2 and UNiGa from ab initio calculations 486
Malonate
structural studies on monomeric and dimeric uranyl bis(dimethylmalonato)complexes 139
Martensitic transformation
phase transformation in Pu–Ga alloys at low temperature and under pressure: limit stability of the δ phase 370
Mass distribution
fission mechanisms in the carbon-induced fission of uranium 322
Mass spectrometry
thermodynamic study of the vaporization of Cs_2UO_4 by high temperature mass spectrometry 625
Mathematical modelling
recent achievements of actinide radiation chemistry 723
Matrices
nuclear fuels for actinides burning CAPRA and SPIN programmes status 517
Mechanism
kinetics of actinide complexation reactions 712
Mechanisms
recent achievements of actinide radiation chemistry 723
Metallurgy
on the characterization of $(U,Np)_xT_yX_z$ intermetallic solid solutions 513
Microanalysis X
in vitro measurement of UO_2/phosphate ion interactions at the particle surface: preliminary results using electron dispersive energy (EDS) and ^{32}P adsorption assays 96
Microdistribution
the effect of a delayed chronic DTPA treatment on the Pu microdistribution in rat bone: preliminary results using hemi-blocks of femurs 93
Microspheres
irradiation behavior of microspheres of U-Zr alloys 670
Mineralization
Actinide immobilization in the subsurface environment by in-situ treatment with a hydrolytically unstable organophosphorus complexant: Uranyl uptake by calcium phytate 257
Minor actinide
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
Minor actinides transmutation
concept of hydride fuel target subassemblies in a fast reactor core for effective transmutation of MA 530
Mixed oxides
effect of cations on lattice constants of $(M_yU_{1-y})O_{2.00}$ (M=Pu, Th, La) at low doped cation concentrations 391
Mixed-valence
triamidoamine complexes of the actinides; from mixed-valence bimetallics to dinitrogen activation 150
Molecular dynamics simulation
structure and dynamic properties of molten uranium trichloride 355
Molecular geometry
the vibrational frequencies, molecular geometry and thermodynamic properties of the actinide tetrahalides 583
Molten fluorides
modeling and estimating the distribution of trivalent actinides and lanthanides between molten fluorides and liquid metal 645
Molten LiCl–KCl
stability of UNCl in LiCl–KCl eutectic melt 374
Molten salt
thermodynamics of reductive extraction of actinides and lanthanides from molten chloride salt into liquid metal 587
measurement of standard potentials of actinides (U,Np,Pu,Am) in LiCl–KCl eutectic salt and separation of actinides from rare earths by electrorefining 592
electrochemical behavior of actinide ions in LiCl–KCl eutectic melts 685
Molten uranium trichloride
structure and dynamic properties of molten uranium trichloride 355
Monodentate coordination
determination of structural parameters of uranyl ions complexed with organic acids using EXAFS 123
Monopicolinate
uranyl monopicolinate complexes 180
Mössbauer spectroscopy
coordination chemistry of neptunyl(V) compounds by means of Mössbauer spectroscopy 176
MOX
chemical composition of inhalable MOX powders prepared according to a SOLGEL process: energy dispersive X-ray analysis of individual particles 38

Narrow f-bands
ARPES in strongly correlated 4f and 5f systems: Comparison to the Periodic Anderson Model (PAM) 826
Natural aquatic system
uranium speciation in waters of different uranium mining areas 201
Neodymium(III)
luminescence study on determination of the inner-sphere hydration number of Am(III) and Nd(III) 867
Neptunium
experimental approaches to improve the available chelator treatments for Np decorporation 89
early biokinetics of actinides after intravenous administration of soluble forms of Pu(IV), Np(IV) and Np(V) 103
peculiarities of complex formation of hexavalent Np and Pu with tetrahedral XO_4^{2-} oxoanions (X=S, Se, Cr, Mo) 154
the incorporation of plutonium and neptunium in zirconolite and perovskite 221
capture of Pu(V), Np(V) and Pu(VI) from alkaline solutions by hydroxides of Pu(IV), Th(IV) and La(III) 231

the investigation of the neptunium complexes formed upon interaction of high level waste glass and Boom Clay media 267
the applications of formo- and aceto-hydroxamic acids in nuclear fuel reprocessing 534
Actinide transmutation: new investigation on some actinide compounds 557
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
the interaction of Np(V), Pu(VI) and Tc(VII) with metal in alkaline solutions 803
Neptunium (IV)
the formation of hydrophilic Np(IV) complexes and their potential application in nuclear fuel reprocessing 650
the oxidation of neptunium(IV) by nitric acid in 100% TBP and diluted TBP/*n*-dodecane solutions 817
Neptunium metal
electrochemical preparation of high purity uranium and neptunium metals from aqueous solutions 680
Neptunium nitride
thermal conductivity of actinide mononitride solid solutions 602
Neptunium organometallics
high-temperature transuranium organometallic species from laser ablation of actinide–polymer mixtures 359
Neptunium–plutonium mixed oxides
thermal expansion of neptunium–plutonium mixed oxides 404
Neptunium recovery
neptunium concentration profiles in the Purex process 689
Neptunium reduction
neptunium concentration profiles in the Purex process 689
Neptunyl(V) compounds
coordination chemistry of neptunyl(V) compounds by means of Mössbauer spectroscopy 176
Neutron diffraction
pressure effect on the magnetic and crystallographic structures in the $U(Ni_{1-x}Cu_x)_2Ge_2$ system 378
magnetic structures of the ternary stannide $U_2(Ni_{0.70}Pd_{0.30})_2Sn$ 444
magnetic structure of the ternary germanide $U_3Cu_4Ge_4$ 448
incommensurate and ferrimagnetic phases in $U(Ni,M)_2Si_2$ with minor M=Co or Cu 474
Neutron inelastic scattering
observation of two low-energy responses in UPd_2Al_3—interaction of magnetism and superconductivity? 433
Neutron irradiation
preparation, analysis and irradiation of hydrided U–Th–Zr alloy samples for a new fuel 702
Neutron powder diffraction
Ac-susceptibility and neutron diffraction studies of the $URu_{1-x}Pd_xGa$ system 503
N_2–H_2 mixture
the formation of uranium sesquinitride by reactions of U or UH_3 with a N_2–H_2 mixture 662
Niobium
extraction of the fluoride-, chloride- and bromide complexes of the elements Nb, Ta, Pa, and 105 into aliphatic amines 292
Nitrate
uranyl monopicolinate complexes 180
Nitric acid
the oxidation of neptunium(IV) by nitric acid in 100% TBP and diluted TBP/*n*-dodecane solutions 817
Nitric acid solutions
new method for actinide and rare-earth element recovery by diphenyl[dibutylcarbamoylmethyl]phosphine oxide from nitric acid solutions 760
Nitride
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
Nitride fuel
thermal conductivity of actinide mononitride solid solutions 602
phase equilibria in the ternary URu_3–URh_3–UPd_3 system 641
Nitrous acid
neptunium concentration profiles in the Purex process 689
^{259}No
thermochromatography of heavy actinides adsorption of No-259 on Ti, V, Nb, Ta and Mo 316
(Np, Pu)N
vaporization behavior of (Np,Pu)N 666
NpN
Actinide nitrides and nitride–halides in high-temperature systems 347
NpO_2
magnetic order in NpO_2 and UO_2 studied by muon spin rotation 463
NpO_2^+
surface sorption and surface diffusion of NpO_2^+ with poorly crystallized ferric oxide 252
Np(V)
complexation of NpO_2^+ by aromatic polycarboxylates 774
Nuclear fuel
direct disposal of spent nuclear fuel: comparison between experimental and modelled actinide solubiluties in natural waters 194
XPS and XRD studies of corrosion of uranium nitride by water 568
preparation, analysis and irradiation of hydrided U–Th–Zr alloy samples for a new fuel 702
Nuclear reprocessing
the applications of formo- and aceto-hydroxamic acids in nuclear fuel reprocessing 534

Oligomerization
designing new catalytic C–C and C–N bond formations promoted by organoactinides 116
Omega structure
interdiffusion in the U–Zr system at δ-phase compositions 597
On-line
simple on-line monitoring of α- and β-emitters by solid scintillation counting 31
On-line gas chromatography
evidence for relativistic effects in the chemistry of element 104 287
Optical absorption spectroscopy
complexation behavior of Pu(IV) and Pu(VI) with urea in nitric acid solution 809
Optical filters
simultaneous counting of radiation emitted from actinides with improved phoswich detectors by applying an optical filter 58
Optical spectrum
optical and magneto-optical spectroscopy of uranium and plutonium compounds: recent theoretical progress 831
Optical transition energies
electronic structure of f^1 actinide complexes. Part 3 of [1]. Quasi-relativistic density functional calculations of the optical transition energies of PaX_6^{2-} (X=F, Cl, Br, I) 859
Optogalvanic spectroscopy
determination of actinide isotope ratios using glow discharge optogalvanic spectroscopy 62
Orbital and spin moments
orbital and spin moments in uranium compounds from X-ray magnetic circular dichroism 414
Organoactinides
designing new catalytic C–C and C–N bond formations promoted by organoactinides 116

Orthophosphates
effects of self-radiation damage on electronic properties of $^{244}Cm^{3+}$ in an orthophosphate crystal of YPO_4 872
Oxalate precipitation
development of transuranium elements recovery from high-level radioactive liquid waste 563
Oxidation
oxidation kinetics of plutonium in air: consequences for environmental dispersal 211
influence of low temperature air oxidation on the dissolution behaviour of UO_2 and MOX spent fuel 573
phase characterisation of simulated high burn-up UO_2 fuel 610
Oxychloride
enthalpy of solution of californium oxychloride; calculation of the standard enthalpy of formation of CfOCl 676
Oxychlorides
chemistry gains a new element: $Z=106$ 277
Oxyhalides
evidence for relativistic effects in the chemistry of element 104 287

Palladium
crystal structure and magnetic susceptibility of uranium palladium sulfide bronze, $U_xPd_3S_4$ 452
Palladium alloy
local structure of $(U,Zr)Pd_3$ by EXAFS 363
Partial molar enthalpy
thermodynamic study on α-U_2N_{3-x} using N-rich starting material ($x \geq 0.6$) 658
Partial molar entropy
thermodynamic study on α-U_2N_{3-x} using N-rich starting material ($x \geq 0.6$) 658
Partial molar free energy
thermodynamic study on α-U_2N_{3-x} using N-rich starting material ($x \geq 0.6$) 658
Particle
in vitro measurement of UO_2/phosphate ion interactions at the particle surface: preliminary results using electron dispersive energy (EDS) and ^{32}P adsorption assays 96
Particle retention and clearance
issues and research on the biochemistry of inhaled actinides 66
Partitioning
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
Pentavalent
uranium amides as precursors to cationic and/or pentavalent compounds 144
Pentavalent uranium
crystal structure of distorted fluorite-type SrU_2O_6 with pentavalent uranium 479
Periodic Anderson Model (PAM)
ARPES in strongly correlated 4f and 5f systems: Comparison to the Periodic Anderson Model (PAM) 826
Perovskite
the incorporation of plutonium and neptunium in zirconolite and perovskite 221
Phase diagram
magnetic phases and magnetoelastic phenomena in UNiGa under pressure 495
thermodynamic assessment of the Fe–U, U–Zr and Fe–U–Zr systems 636
Phase morphology
phase transformation in Pu–Ga alloys at low temperature and under pressure: limit stability of the δ phase 370
Phosphate
in vitro measurement of UO_2/phosphate ion interactions at the particle surface: preliminary results using electron dispersive energy (EDS) and ^{32}P adsorption assays 96
investigations by time-resolved laser-induced fluorescence and capillary electrophoresis of the uranyl–phosphate species: application to blood serum 106
Actinides immobilization in new matrices based on solid solutions: $Th_{4-x}M^{IV}_x(PO_4)_4P_2O_7$, ($M^{IV}=^{238}U,^{239}Pu$) 236
Phosphotungstate
thermodynamics of actinide redox reactions in potassium phosphotungstate solutions 782
Phoswich detectors
simultaneous counting of radiation emitted from actinides with improved phoswich detectors by applying an optical filter 58
Photoemission spectroscopy
thin layers in actinide research 841
Photophysics
spectroscopy and dynamics of 5f states of Es^{3+} in LaF_3 850
Phytic acid
Actinide immobilization in the subsurface environment by in-situ treatment with a hydrolytically unstable organophosphorus complexant: Uranyl uptake by calcium phytate 257
Pitzer model
spectroscopic evaluation of thermodynamics of trivalent actinides in brines 728
Platinum metals
phase equilibria in the ternary URu_3–URh_3–UPd_3 system 641
Plutonium
strengthening IAEA safeguards through environmental sampling and analysis 11
trace analysis of plutonium in environmental samples by resonance ionization mass spectroscopy (RIMS) 45
issues and research on the biochemistry of inhaled actinides 66
experimental approaches to improve the available chelator treatments for Np decorporation 89
the effect of a delayed chronic DTPA treatment on the Pu microdistribution in rat bone: preliminary results using hemi-blocks of femurs 93
extraction of Pu from rat bone by formic acid/guanidine treatment after intravenous ^{238}Pu-citrate administration: influence of time after contamination and of a chronic DTPA treatment 100
early biokinetics of actinides after intravenous administration of soluble forms of Pu(IV), Np(IV) and Np(V) 103
peculiarities of complex formation of hexavalent Np and Pu with tetrahedral XO_4^{2-} oxoanions (X=S, Se, Cr, Mo) 154
oxidation kinetics of plutonium in air: consequences for environmental dispersal 211
the incorporation of plutonium and neptunium in zirconolite and perovskite 221
capture of Pu(V), Np(V) and Pu(VI) from alkaline solutions by hydroxides of Pu(IV), Th(IV) and La(III) 231
Actinides immobilization in new matrices based on solid solutions: $Th_{4-x}M^{IV}_x(PO_4)_4P_2O_7$, ($M^{IV}=^{238}U,^{239}Pu$) 236
calculated lattice relaxation in Pu-Ga alloys 367
Actinide transmutation: new investigation on some actinide compounds 557
influence of low temperature air oxidation on the dissolution behaviour of UO_2 and MOX spent fuel 573
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
fabrication of transmutation and incineration targets by infiltration of porous pellets by radioactive solutions 616
electrochemical behavior of actinide ions in LiCl–KCl eutectic melts 685
the interaction of Np(V), Pu(VI) and Tc(VII) with metal in alkaline solutions 803
complexation behavior of Pu(IV) and Pu(VI) with urea in nitric acid solution 809
behavior of plutonium(V) in alkaline media 813

Plutonium nitride
thermal conductivity of actinide mononitride solid solutions 602
Plutonium organometallics
high-temperature transuranium organometallic species from laser ablation of actinide–polymer mixtures 359
Polar Kerr effect
magneto-optical investigations of URhAl intermetallic compound 467
Polmer ablation
high-temperature transuranium organometallic species from laser ablation of actinide–polymer mixtures 359
Polyaminopolycarboxylate complexes
luminescence study on determination of the inner-sphere hydration number of Am(III) and Nd(III) 867
Polyoxometalates
complexation of uranyl(VI) with polyoxometalates in aqueous solutions 751
Poorly crystallized ferric oxide
surface sorption and surface diffusion of NpO_2^+ with poorly crystallized ferric oxide 252
Pore water
solubility measurements and sorption studies of thorium in cement pore water 272
Pressure
high-pressure X-ray diffraction studies of Cm–Bk alloys: contribution to the actinide pressure-phase diagram 342
Pressure effect
pressure effect on the magnetic and crystallographic structures in the $U(Ni_{1-x}Cu_x)_2Ge_2$ system 378
Pressure effects
magnetic phases and magnetoelastic phenomena in UNiGa under pressure 495
Pressure–temperature–composition relationship
thermodynamic study on α-U_2N_{3+x} using N-rich starting material ($x \geq 0.6$) 658
Preyssler heteropolytungstate anion
synthesis and characterization of actinide-exchanged Preyssler heteropolyanions $[AnP_5W_{30}O_{110}]^{n-}$ (An=Th, Am, Cm) 846
Primates
the bioinorganic chemistry of Np, Pu and Am in mammalian liver 85
Protactinium and element 105
extraction of the fluoride-, chloride- and bromide complexes of the elements Nb, Ta, Pa, and 105 into aliphatic amines 292
Pseudohalides
chloride and pseudohalide complexes of thorium in anhydrous solvents 786
Pu
correlated f-electron materials near a $T=0$ magnetic–nonmagnetic boundary: implications for δ-Pu 335
PuGa alloys
phase transformation in Pu–Ga alloys at low temperature and under pressure: limit stability of the δ phase 370
PuGa alloys: an X-ray absorption study 879
Pulse shape discrimination
simultaneous counting of radiation emitted from actinides with improved phoswich detectors by applying an optical filter 58
PuN
Actinide nitrides and nitride–halides in high-temperature systems 347
PUREX process
the formation of hydrophilic Np(IV) complexes and their potential application in nuclear fuel reprocessing 650
PuSb
surface contamination of single-crystal PuSb 882
PuTe
optical and magneto-optical spectroscopy of uranium and plutonium compounds: recent theoretical progress 831
$Pu_{1-x}U_xSb$
preparation and electrical resistivity of $(Pu_{1-x}U_x)Sb$ and $(Pu_{1-x}Y_x)Sb$ single crystals 490
Pu(VI)
neptunium concentration profiles in the Purex process 689
$Pu_{1-x}Y_xSb$
preparation and electrical resistivity of $(Pu_{1-x}U_x)Sb$ and $(Pu_{1-x}Y_x)Sb$ single crystals 490
Pyrometallurgical partitioning
measurement of standard potentials of actinides (U,Np,Pu,Am) in LiCl–KCl eutectic salt and separation of actinides from rare earths by electrorefining 592

Quenching
isotope and temperature effects on photochemical reactions of uranyl ion in H_2O–D_2O mixtures 794

Radiation damage
U and Pu L_{III} XAFS of Pu-doped glass and ceramic waste forms 240
effects of self-radiation damage on electronic properties of $^{244}Cm^{3+}$ in an orthophosphate crystal of YPO_4 872
Radioactive nuclides
the EFTTRA experiment on irradiation of Am targets 606
Radioactive waste management
new method for actinide and rare-earth element recovery by diphenyl[dibutylcarbamoylmethyl]phosphine oxide from nitric acid solutions 760
Radioactive wastes
biotransformation of uranium and other actinides in radioactive wastes 78
Radiochemical separation
alpha-spectrometry measurement of Am and Cm at trace levels in environmental samples using extraction chromatography 25
Radioisotopes of plutonium
production of plutonium tracers in ^{237}Np nuclear reactions with ^3He-ions in the energy range from 26 to 60 MeV 296
Radiological situation around the plutonium production plant in Russia
up-to-date radioecological situation around the 'Mayak' nuclear facility 216
Radiometry
new method for actinide and rare-earth element recovery by diphenyl[dibutylcarbamoylmethyl]phosphine oxide from nitric acid solutions 760
Radionuclides
up-to-date radioecological situation around the 'Mayak' nuclear facility 216
Radiotoxicology
the use of SIMS for uranium localization in biological research 19
Random anisotropy
preparation of uranium-based magnetic amorphous alloys by RF sputtering 459
Rare earth
measurement of standard potentials of actinides (U,Np,Pu,Am) in LiCl–KCl eutectic salt and separation of actinides from rare earths by electrorefining 592
Rare earth elements
development of transuranium elements recovery from high-level radioactive liquid waste 563
Rat
the bioinorganic chemistry of Np, Pu and Am in mammalian liver 85
Rate constants
recent achievements of actinide radiation chemistry 723
Reactors
Actinide transmutation properties of thermal and fast fission reactors including multiple recycling 522

Reactor severe accident simulation
thermodynamic study of the vaporization of Cs_2UO_4 by high temperature mass spectrometry 625
Recycling
Actinide transmutation properties of thermal and fast fission reactors including multiple recycling 522
Redox behaviour
thermodynamics of actinide redox reactions in potassium phosphotungstate solutions 782
Reductive extraction
thermodynamics of reductive extraction of actinides and lanthanides from molten chloride salt into liquid metal 587
Reductive sorption on metal
the interaction of Np(V), Pu(VI) and Tc(VII) with metal in alkaline solutions 803
Relativistic effects
evidence for relativistic effects in the chemistry of element 104 287
Relativistic molecular calculations
recent progress in theoretical investigations of the electronic structure of the transactinides 283
Resistivity
transport properties of $(U_{1-x}Np_x)Pd_2Al_3$ and $(U_{1-x}Pu_x)Pd_2Al_3$ intermetallic solid solutions 437
preparation and electrical resistivity of $(Pu_{1-x}U_x)Sb$ and $(Pu_{1-x}Y_x)Sb$ single crystals 490
Resisitivity anisotropy
anisotropic resistivity and giant magnetoresistance in UNi_2Ge_2 and UNiGa from ab initio calculations 486
Resonance ionization mass spectroscopy
trace analysis of plutonium in environmental samples by resonance ionization mass spectroscopy (RIMS) 45
Respiratory tract
issues and research on the biochemistry of inhaled actinides 66
Rietveld analysis
crystal structure of distorted fluorite-type SrU_2O_6 with pentavalent uranium 479
Rietveld refinement
preparation and structure of quaternary mixed sulphide $Li(Lu,M)S_2$ (M=U,Ce) 382
RIMS
determination of the first ionization potential of einsteinium by resonance ionization mass spectroscopy (RIMS) 876
RIMS1
determination of the first ionization potential of nine actinide elements by resonance ionization mass spectroscopy (RIMS) 837
Rise times
simultaneous counting of radiation emitted from actinides with improved phoswich detectors by applying an optical filter 58
RKKY model
pressure effect on the magnetic and crystallographic structures in the $U(Ni_{1-x}Cu_x)_2Ge_2$ system 378
Rutherfordium
evidence for relativistic effects in the chemistry of element 104 287
review of the SISAK system in transactinide research recent developments and future prospects 303
sorption behaviour of rutherfordium and thorium from HCl/Hf containing aqueous solution 307

Safeguards
strengthening IAEA safeguards through environmental sampling and analysis 11
Salt-free
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
Scanning transmission electron microscopy
chemical composition of inhalable MOX powders prepared according to a SOLGEL process: energy dispersive X-ray analysis of individual particles 38
Scission configuration
experimental verification of two deformation paths in the mass division process of actinides 327
Seaborgium
chemistry gains a new element: $Z=106$ 277
first aqueous chemistry with seaborgium (element 106) 312
Selectivity
solvent extraction of U(VI) from media containing competing anions and metal cations by a calix[6]arene bearing carboxy groups 778
Separation
separation of actinides from a bone ash matrix with extraction chromatography 49
trivalent minor actinides/lanthanides separation, using organophosphinic acids 159
the applications of formo- and aceto-hydroxamic acids in nuclear fuel reprocessing 534
modeling and estimating the distribution of trivalent actinides and lanthanides between molten fluorides and liquid metal 645
separation of actinides from simulated spent fuel solutions by an advanced ion-exchange process 693
extraction of americium and lanthanides by dialkyldithiophosphinic acid and f-f absorption spectra of the extraction complexes 742
Separation of plutonium and neptunium by extraction chromatography
production of plutonium tracers in ^{237}Np nuclear reactions with ^3He-ions in the energy range from 26 to 60 MeV 296
SETFICS
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
Siderophore
complexation of Th (IV) with the siderophore pyoverdine A 206
Siderophore analogues
decorporation of actinides: a review of recent research 72
Silicate
interaction of uranium(VI) with silicic acid in aqueous solutions studied by time-resolved laser-induced fluorescence spectroscopy (TRLFS) 765
Silicic acid
interaction of uranium(VI) with silicic acid in aqueous solutions studied by time-resolved laser-induced fluorescence spectroscopy (TRLFS) 765
SIMS
the use of SIMS for uranium localization in biological research 19
Simulated spent fuel
phase characterisation of simulated high burn-up UO_2 fuel 610
Simultaneous counting
simultaneous counting of radiation emitted from actinides with improved phoswich detectors by applying an optical filter 58
SISAK
review of the SISAK system in transactinide research recent developments and future prospects 303
Sodium triacetatodioxouranium(VI)
determination of structural parameters of uranyl ions complexed with organic acids using EXAFS 123
Solid compounds
peculiarities of complex formation of hexavalent Np and Pu with tetrahedral XO_4^{2-} oxoanions (X=S, Se, Cr, Mo) 154
Solid scintillation counting
simple on-line monitoring of α- and β-emitters by solid scintillation counting 31
Solid-solution
Actinides immobilization in new matrices based on solid solutions: $Th_{4-x}M^{IV}_x(PO_4)_4P_2O_7$, ($M^{IV}=^{238}U,^{239}Pu$) 236

Solid solutions
incommensurate and ferrimagnetic phases in $U(Ni,M)_2Si_2$ with minor M=Co or Cu 474
Solubility
a method to predict free energies of formation of mineral phases in the $U(VI)–SiO_2–H_2O$ system 189
solubility measurements and sorption studies of thorium in cement pore water 272
Solution thermodynamics
spectroscopic evaluation of thermodynamics of trivalent actinides in brines 728
Solvent extraction
electronic structures of actinyl nitrate–triethyl phosphate complexes using the DV–DS method 128
the separation of trivalent actinides from lanthanides by dithiophosphinic acids from HNO_3 acid medium 248
equilibrium distributions of trivalent actinides and lanthanides in the liquid–liquid extraction system of TBP and molten $Ca(NO_3)_2 \cdot 4H_2O$ 707
complexation of uranyl(VI) with polyoxometalates in aqueous solutions 751
solvent extraction of U(VI) from media containing competing anions and metal cations by a calix[6]arene bearing carboxy groups 778
solvent extraction study of actinide elements by *N,N'*-dimethyl-*N,N'*-dihexyl-3-oxapentanediamide and thenoyltrifluoroacetone 799
Solventless extraction
new method for actinide and rare-earth element recovery by diphenyl[dibutylcarbamoylmethyl]phosphine oxide from nitric acid solutions 760
Sorption
surface sorption and surface diffusion of NpO_2^+ with poorly crystallized ferric oxide 252
solubility measurements and sorption studies of thorium in cement pore water 272
Speciation
the bioinorganic chemistry of actinides in blood 6
uranium speciation in waters of different uranium mining areas 201
Specific heat
correlated f-electron materials near a $T=0$ magnetic–nonmagnetic boundary: implications for δ-Pu 335
specific heat measurements on $U_2(Ru_{1-x},Rh_x)_3Si_5$ ternary silicides 423
Spectrophotometry
the applications of formo- and aceto-hydroxamic acids in nuclear fuel reprocessing 534
new method for actinide and rare-earth element recovery by diphenyl[dibutylcarbamoylmethyl]phosphine oxide from nitric acid solutions 760
complexation of NpO_2^+ by aromatic polycarboxylates 774
the oxidation of neptunium(IV) by nitric acid in 100% TBP and diluted TBP/*n*-dodecane solutions 817
Spectroscopy
spectroscopy and dynamics of 5f states of Es^{3+} in LaF_3 850
emission profile of Bk(III) in a silicate matrix: anomalous dependence on excitation power 854
α-Spectroscopy
a fast method for low-level actinide measurement in concrete 42
Spent fuel
influence of low temperature air oxidation on the dissolution behaviour of UO_2 and MOX spent fuel 573
Spent nuclear fuel
a method to predict free energies of formation of mineral phases in the $U(VI)–SiO_2–H_2O$ system 189
separation of actinides from simulated spent fuel solutions by an advanced ion-exchange process 693
Spinel
fabrication of transmutation and incineration targets by infiltration of porous pellets by radioactive solutions 616
Spin fluctuation
critical electron scattering in UGe_2 near the magnetic phase transition induced by pressure 482
Spin wave
observation of two low-energy responses in UPd_2Al_3—interaction of magnetism and superconductivity? 433
Sputter deposition
thin layers in actinide research 841
Sputtering
preparation of uranium-based magnetic amorphous alloys by RF sputtering 459
μSR
magnetic order in NpO_2 and UO_2 studied by muon spin rotation 463
Stability constants
complexation of uranyl(VI) with polyoxometalates in aqueous solutions 751
complexation of NpO_2^+ by aromatic polycarboxylates 774
Stability diagram
Actinide nitrides and nitride–halides in high-temperature systems 347
Stability quotient determination
complexation behavior of Pu(IV) and Pu(VI) with urea in nitric acid solution 809
Standard Gibbs free energy of formation
a method to predict free energies of formation of mineral phases in the $U(VI)–SiO_2–H_2O$ system 189
Standard potential
measurement of standard potentials of actinides (U,Np,Pu,Am) in LiCl–KCl eutectic salt and separation of actinides from rare earths by electrorefining 592
Steric effect
steric effect of β-diketone in synergistic extraction of actinide(III) and lanthanide(III) with β-diketone +18-crown-6 ether/1,2-dichloroethane 790
Stoichiometry
uranyl monopicolinate complexes 180
Structural properties
specific heat measurements on $U_2(Ru_{1-x},Rh_x)_3Si_5$ ternary silicides 423
Structure
preparation and structure of quaternary mixed sulphide $Li(Lu,M)S_2$ (M=U,Ce) 382
Sublimation enthalpy
thermochromatography of heavy actinides adsorption of No-259 on Ti, V, Nb, Ta and Mo 316
Sulfate-reducing bacteria
bacteria from uranium mining waste pile: interactions with U(VI) 262
Sulfide
crystal structure and magnetic susceptibility of uranium palladium sulfide bronze, $U_xPd_1S_4$ 452
5-Sulfosalicylic acid
a complexation study of Cm(III) and Tb(III) with chelating aromatic ligands by time-resolved laser fluorescence spectroscopy 746
Superconductivity
observation of two low-energy responses in UPd_2Al_3—interaction of magnetism and superconductivity? 433
Surface contamination
surface contamination of single-crystal PuSb 882
Surface diffusion
surface sorption and surface diffusion of NpO_2^+ with poorly crystallized ferric oxide 252

Susceptibility
magnetic properties of the $U_{1-x}Gd_xNi_2$ system 471
high temperature susceptibilities of actinide monopnictides and monochalcogenides 508
Synergistic extraction
solvent extraction study of actinide elements by *N,N'*-dimethyl-*N,N'*-dihexyl-3-oxapentanediamide and thenoyltrifluoroacetone 799
Synergistic ion-pair extraction
steric effect of β-diketone in synergistic extraction of actinide(III) and lanthanide(III) with β-diketone +18-crown-6 ether/1,2-dichloroethane 790
Synergistic systems
Am (III)/Eu (III) separation at low pH using synergistic mixtures composed of carboxylic acids and neutral nitrogen polydendate ligands 738
Synroc
the incorporation of plutonium and neptunium in zirconolite and perovskite 221
Synthesis
synthesis and characterization of strontium pentachlorouranate(III) and dibarium heptachlorouranate(III) 863

Tantalum
extraction of the fluoride-, chloride- and bromide complexes of the elements Nb, Ta, Pa, and 105 into aliphatic amines 292
TBP
equilibrium distributions of trivalent actinides and lanthanides in the liquid–liquid extraction system of TBP and molten $Ca(NO_3)_2 \cdot 4H_2O$ 707
Technetium
the interaction of Np(V), Pu(VI) and Tc(VII) with metal in alkaline solutions 803
Temperature
isotope and temperature effects on photochemical reactions of uranyl ion in H_2O–D_2O mixtures 794
Temperature dependence
vaporization behavior of (Np,Pu)N 666
Temperature factor
unusual variation of temperature factor of uranium dioxide at high temperature 386
Terbium
a complexation study of Cm(III) and Tb(III) with chelating aromatic ligands by time-resolved laser fluorescence spectroscopy 746
Ternary stannides
magnetic structures of the ternary stannide $U_2(Ni_{0.70}Pd_{0.30})_2Sn$ 444
Ternary sulphides
preparation and structure of quaternary mixed sulphide $Li(Lu,M)S_2$ (M=U,Ce) 382
Tetramethyl ammonium hydroxide
separation of actinides and fission products in high-level liquid wastes by the improved TRUEX process 538
Thenoyltrifluoroacetone
solvent extraction study of actinide elements by *N,N'*-dimethyl-*N,N'*-dihexyl-3-oxapentanediamide and thenoyltrifluoroacetone 799
Thermal conductivity
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
thermal conductivity of actinide mononitride solid solutions 602
the influence of americium oxide inclusions on the thermal conductivity of inert-matrix fuel 632
Thermal diffusivity
thermal conductivity of actinide mononitride solid solutions 602
Thermal expansion
thermodynamic aspects of heavy fermion compounds under high pressure 331
correlated f-electron materials near a $T=0$ magnetic–nonmagnetic boundary: implications for δ-Pu 335
thermal expansion of neptunium–plutonium mixed oxides 404
magnetic phases and magnetoelastic phenomena in UNiGa under pressure 495
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
Thermal properties
mechanical and thermal properties of uranium intermetallic compounds 549
Actinide transmutation: new investigation on some actinide compounds 557
Thermochromatography
thermochromatography of heavy actinides adsorption of No-259 on Ti, V, Nb, Ta and Mo 316
Thermodynamic databases
criteria for compilation of a site-specific thermodynamic database for geochemical speciation calculations 821
Thermodynamic properties
thermodynamics of reductive extraction of actinides and lanthanides from molten chloride salt into liquid metal 587
Thermodynamics
Actinide nitrides and nitride–halides in high-temperature systems 347
enthalpies of formation of UGa_2 and UGa_3 by calorimetry 395
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
Thick-target yields
production of plutonium tracers in ^{237}Np nuclear reactions with ^3He-ions in the energy range from 26 to 60 MeV 296
Thin films
thin layers in actinide research 841
Thiocyanate
crown ether complexes of $UO_2(NCS)_2$ and $Th(NCS)_4$: clues to solution behavior or just interesting supramolecular structures? 133
Thorium
crown ether complexes of $UO_2(NCS)_2$ and $Th(NCS)_4$: clues to solution behavior or just interesting supramolecular structures? 133
complexation of Th (IV) with the siderophore pyoverdine A 206
Actinides immobilization in new matrices based on solid solutions: $Th_{4-x}M_x^{IV}(PO_4)_4P_2O_7$, ($M^{IV}=^{238}U,^{239}Pu$) 236
solubility measurements and sorption studies of thorium in cement pore water 272
Thorium (IV)
investigation of thorium(IV) separation from cerium(IV) on a silica gel column coated with tri-octylphosphine oxide 620
Thorium complexes
chloride and pseudohalide complexes of thorium in anhydrous solvents 786
Time-resolved laser-induced fluorescence
investigations by time-resolved laser-induced fluorescence and capillary electrophoresis of the uranyl–phosphate species: application to blood serum 106
Time-resolved laser-induced fluorescence spectroscopy
uranium speciation in waters of different uranium mining areas 201
TKE
experimental verification of two deformation paths in the mass division process of actinides 327
TOF measurement
experimental verification of two deformation paths in the mass division process of actinides 327

Trace detection
trace analysis of plutonium in environmental samples by resonance ionization mass spectroscopy (RIMS) 45
Transactinides
recent progress in theoretical investigations of the electronic structure of the transactinides 283
review of the SISAK system in transactinide research recent developments and future prospects 303
Transferrin
the bioinorganic chemistry of actinides in blood 6
Transmutation
nuclear fuels for actinides burning CAPRA and SPIN programmes status 517
Actinide transmutation properties of thermal and fast fission reactors including multiple recycling 522
inert matrices for the transmutation of actinides: fabrication, thermal properties and radiation stability of ceramic materials 544
Actinide transmutation: new investigation on some actinide compounds 557
fabrication of transmutation and incineration targets by infiltration of porous pellets by radioactive solutions 616
the influence of americium oxide inclusions on the thermal conductivity of inert-matrix fuel 632
Transuranium elements
development of transuranium elements recovery from high-level radioactive liquid waste 563
Triamidoamine
triamidoamine complexes of the actinides: from mixed-valence bimetallics to dinitrogen activation 150
Tri-Butyl phosphate
chromatographic studies of Rf (element 104) with tributylphosphate (TBP) 300
the oxidation of neptunium(IV) by nitric acid in 100% TBP and diluted TBP/*n*-dodecane solutions 817
Trioctylphosphine oxide
investigation of thorium(IV) separation from cerium(IV) on a silica gel column coated with tri-octylphosphine oxide 620
Trivalent actinides
spectroscopic evaluation of thermodynamics of trivalent actinides in brines 728
TRU recovery
applicability of insoluble tannin to treatment of waste containing americium 244
TRU waste treatment
applicability of insoluble tannin to treatment of waste containing americium 244
Two Np sites
coordination chemistry of neptunyl(V) compounds by means of Mössbauer spectroscopy 176

$(U,Ce)O_2$
mechanical properties of $(U,Ce)O_2$ 697
UFe_2
optical and magneto-optical spectroscopy of uranium and plutonium compounds: recent theoretical progress 831
UFe_2Zn_{20}
UFe_2Zn_{20}: a new uranium intermetallic compound 456
U-free fuels
nuclear fuels for actinides burning CAPRA and SPIN programmes status 517
UGa_2
preparation of uranium-based magnetic amorphous alloys by RF sputtering 459
U–Ga system
enthalpies of formation of UGa_2 and UGa_4 by calorimetry 395
UGe_2
preparation of uranium-based magnetic amorphous alloys by RF sputtering 459
UN
Actinide nitrides and nitride–halides in high-temperature systems 347
XPS and XRD studies of corrosion of uranium nitride by water 568
UNCl
Actinide nitrides and nitride–halides in high-temperature systems 347
Underpotential deposition
electrochemical behavior of actinide ions in LiCl–KCl eutectic melts 685
UNF
Actinide nitrides and nitride–halides in high-temperature systems 347
α-U_2N_{3+x}
thermodynamic study on α-U_2N_{3+x} using N-rich starting material ($x \geq 0.6$) 658
UNiGa
anisotropic resistivity and giant magnetoresistance in UNi_2Ge_2 and UNiGa from ab initio calculations 486
$U(Ni,M)_2Si_2$
incommensurate and ferrimagnetic phases in $U(Ni,M)_2Si_2$ with minor M=Co or Cu 474
$U_{1-x}Np_xPd_2Al_3$
transport properties of $(U_{1-x}Np_x)Pd_2Al_3$ and $(U_{1-x}Pu_x)Pd_2Al_3$ intermetallic solid solutions 437
$(U,Np)_xT_yX_z$
on the characterization of $(U,Np)_xT_yX_z$ intermetallic solid solutions 513
UO_2
unusual variation of temperature factor of uranium dioxide at high temperature 386
magnetic order in NpO_2 and UO_2 studied by muon spin rotation 463
UO_2^{2+}
isotope and temperature effects on photochemical reactions of uranyl ion in H_2O–D_2O mixtures 794
UO_2–La_2O_3 solid solution
effect of cations on lattice constants of $(M_xU_{1-x})O_{2.00}$ (M=Pu, Th, La) at low doped cation concentrations 391
UO_2–PuO_2 solid solution
effect of cations on lattice constants of $(M_xU_{1-x})O_{2.00}$ (M=Pu, Th, La) at low doped cation concentrations 391
UO_2–ThO_2 solid solution
effect of cations on lattice constants of $(M_xU_{1-x})O_{2.00}$ (M=Pu, Th, La) at low doped cation concentrations 391
UPd_2Al_3
observation of two low-energy responses in UPd_2Al_3—interaction of magnetism and superconductivity? 433
UPdSn
electronic properties of UPdSn diluted by Lu 418
$U_{1-x}Pu_xPd_2Al_3$
transport properties of $(U_{1-x}Np_x)Pd_2Al_3$ and $(U_{1-x}Pu_x)Pd_2Al_3$ intermetallic solid solutions 437
Uranium
strengthening IAEA safeguards through environmental sampling and analysis 11
the use of SIMS for uranium localization in biological research 19
exposure limits and assessment of intake for inhaled soluble uranium compounds 54
determination of actinide isotope ratios using glow discharge optogalvanic spectroscopy 62
biotransformation of uranium and other actinides in radioactive wastes 78
in vitro measurement of UO_2/phosphate ion interactions at the particle surface: preliminary results using electron dispersive energy (EDS) and ^{32}P adsorption assays 96

uranium amides as precursors to cationic and/or pentavalent compounds 144
triamidoamine complexes of the actinides; from mixed-valence bimetallics to dinitrogen activation 150
structural study of holmium (III) and uranium (VI) organic ligand complexes by extended X-ray absorbtion fine-structure spectroscopy 184
uranium speciation in waters of different uranium mining areas 201
Actinides immobilization in new matrices based on solid solutions: $Th_{4-x}M^{IV}_x(PO_4)_4P_2O_7$, ($M^{IV}$=$^{238}U$,$^{239}Pu$) 236
bacteria from uranium mining waste pile: interactions with U(VI) 262
specific heat measurements on $U_2(Ru_{1-x}Rh_x)_3Si_5$ ternary silicides 423
magnetic structure of the ternary germanide $U_3Cu_4Ge_4$ 448
crystal structure and magnetic susceptibility of uranium palladium sulfide bronze, $U_3Pd_3S_4$ 452
mechanical and thermal properties of uranium intermetallic compounds 549
influence of low temperature air oxidation on the dissolution behaviour of UO_2 and MOX spent fuel 573
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
hydrogen absorption properties of U_6Mn and U_6Ni 629
electrochemical behavior of actinide ions in LiCl–KCl eutectic melts 685
solvent extraction of U(VI) from media containing competing anions and metal cations by a calix[6]arene bearing carboxy groups 778

Uranium(VI)
investigations by time-resolved laser-induced fluorescence and capillary electrophoresis of the uranyl–phosphate species: application to blood serum 106

Uranium-238
fission mechanisms in the carbon-induced fission of uranium 322

Uranium adsorption
distribution of uranium on zeolite X and investigation of thermodynamic parameters for this system 769

Uranium alloy
local structure of $(U,Zr)Pd_3$ by EXAFS 363
interdiffusion in the U–Zr system at δ-phase compositions 597

Uranium and plutonium solubility
criteria for compilation of a site-specific thermodynamic database for geochemical speciation calculations 821

Uranium compounds
orbital and spin moments in uranium compounds from X-ray magnetic circular dichroism 414
UFe_2Zn_{20}: a new uranium intermetallic compound 456
incommensurate and ferrimagnetic phases in $U(Ni,M)_2Si_2$ with minor M=Co or Cu 474

Uranium(III) chloro complexes
synthesis and characterization of strontium pentachlorouranate(III) and dibarium heptachlorouranate(III) 863

Uranium intermetallic
magneto-optical investigations of URhAl intermetallic compound 467

Uranium intermetallics
structure, magnetic and electrical properties of the $UMn_{4-x}Fe_xAl_8$ system 499

Uranium metal
electrochemical preparation of high purity uranium and neptunium metals from aqueous solutions 680

Uranium monocarbide
thermodynamics of nitrogen-rich uranium sesquinitride formation by reaction of uranium monocarbide with ammonia 654

Uranium–neptunium mixed oxides
electrical conductivity of uranium–neptunium mixed oxides 400

Uranium nitride
XPS and XRD studies of corrosion of uranium nitride by water 568
thermal conductivity of actinide mononitride solid solutions 602

Uranium nitride chloride
stability of UNCl in LiCl–KCl eutectic melt 374

Uranium sesquinitride
thermodynamics of nitrogen-rich uranium sesquinitride formation by reaction of uranium monocarbide with ammonia 654
the formation of uranium sesquinitride by reactions of U or UH_3 with a N_2–H_2 mixture 662

Uranium ternary compound
crystal structure of distorted fluorite-type SrU_2O_6 with pentavalent uranium 479

Uranium–thorium–zirconium alloy
preparation, analysis and irradiation of hydrided U–Th–Zr alloy samples for a new fuel 702

Uranyl
crown ether complexes of $UO_2(NCS)_2$ and $Th(NCS)_4$: clues to solution behavior or just interesting supramolecular structures? 133
structural studies on monomeric and dimeric uranyl bis(dimethylmalonato)complexes 139
uranyl monopicolinate complexes 180
Actinide immobilization in the subsurface environment by in-situ treatment with a hydrolytically unstable organophosphorus complexant: Uranyl uptake by calcium phytate 257
deactivation and luminescence lifetimes of excited uranyl ion and its fluoro complexes 756

Uranyl–citrate
biotransformation of uranium and other actinides in radioactive wastes 78

Uranyl complexes
electrochemical studies on bis(β-diketonato)(dimethyl sulfoxide)dioxouranium(VI) in dimethyl sulfoxide 163

Uranyl fluoro complexes
deactivation and luminescence lifetimes of excited uranyl ion and its fluoro complexes 756

Uranyl ion
complexation of uranyl(VI) with polyoxometalates in aqueous solutions 751
interaction of uranium(VI) with silicic acid in aqueous solutions studied by time-resolved laser-induced fluorescence spectroscopy (TRLFS) 765

Uranyl phases
a method to predict free energies of formation of mineral phases in the U(VI)–SiO_2–H_2O system 189

Urea
complexation behavior of Pu(IV) and Pu(VI) with urea in nitric acid solution 809

URhAl
magneto-optical investigations of URhAl intermetallic compound 467
optical and magneto-optical spectroscopy of uranium and plutonium compounds: recent theoretical progress 831

$URu_{1-x}Pd_xGa$
Ac-susceptibility and neutron diffraction studies of the $URu_{1-x}Pd_xGa$ system 503

U(V) species
electrochemical studies on bis(β-diketonato)(dimethyl sulfoxide)dioxouranium(VI) in dimethyl sulfoxide 163

U–Zr
thermodynamic assessment of the Fe–U, U–Zr and Fe–U–Zr systems 636
irradiation behavior of microspheres of U-Zr alloys 670

Vaporization
Actinide nitrides and nitride–halides in high-temperature systems 347
Vaporization behavior
thermodynamic study of the vaporization of Cs_2UO_4 by high temperature mass spectrometry 625
vaporization behavior of (Np,Pu)N 666
Vapor pressure
thermophysical and thermodynamic properties of actinide mononitrides and their solid solutions 577
Vibrational frequencies
the vibrational frequencies, molecular geometry and thermodynamic properties of the actinide tetrahalides 583
Vickers hardness
mechanical properties of $(U,Ce)O_2$ 697
Volume expansion
preparation, analysis and irradiation of hydrided U–Th–Zr alloy samples for a new fuel 702

Waste management
direct disposal of spent nuclear fuel: comparison between experimental and modelled actinide solubiluties in natural waters 194

XPS
XPS and XRD studies of corrosion of uranium nitride by water 568
X-Ray absorption
PuGa alloys: an X-ray absorption study 879
X-ray absorption fine structure
surface contamination of single-crystal PuSb 882
X-Ray absorption spectroscopy
U and Pu L_{III} XAFS of Pu-doped glass and ceramic waste forms 240
orbital and spin moments in uranium compounds from X-ray magnetic circular dichroism 414
X-ray crystallography
structural studies on monomeric and dimeric uranyl bis(dimethylmalonato)complexes 139
X-ray diffraction
unusual variation of temperature factor of uranium dioxide at high temperature 386
X-ray powder diffraction data
synthesis and characterization of strontium pentachlorouranate(III) and dibarium heptachlorouranate(III) 863
X-ray resonant exchange scattering
surface contamination of single-crystal PuSb 882
X-ray scattering
synchrotron radiation as a probe of actinide magnetism (T7-Al 'Magnetism') 408
X-Ray study
high-pressure X-ray diffraction studies of Cm–Bk alloys: contribution to the actinide pressure-phase diagram 342
XRD
XPS and XRD studies of corrosion of uranium nitride by water 568

Yield stress
mechanical properties of $(U,Ce)O_2$ 697

Zeolite
distribution of uranium on zeolite X and investigation of thermodynamic parameters for this system 769
Zeolite X
distribution of uranium on zeolite X and investigation of thermodynamic parameters for this system 769
Zirconolite
the incorporation of plutonium and neptunium in zirconolite and perovskite 221